The
GENERAL LIBRARY
5 1919
UNIV. OF MICH.

The British Medical Journal

The Journal of the British Medical Association.

WITH SUPPLEMENT.

No. 3031. SATURDAY, FEBRUARY 1, 1919. **Price 1/-**

By J. SIM WALLACE, D.Sc., M.D., L.D.S.
THE
Prevention of Common Diseases in Childhood.
Price 3s. 6d. net.

DENTAL DISEASES IN RELATION TO
PUBLIC HEALTH.
"A most masterly exposition."—*Lancet.*
"Dr. Sim Wallace is undoubtedly our greatest leader of modern thought on the subject of oral hygiene."—*New Zealand Dental Journal.*
Price 3s. net.
BAILLIÈRE, TINDALL & COX,
8, Henrietta Street, Covent Garden, London.

Now Ready. Pp. xi. + 269. With 3 Charts. 5s. net.
ON ALCOHOLISM:
Its Clinical Aspects and Treatment.
BY FRANCIS HARE, M.D.,
Medical Superintendent of the
NORWOOD SANATORIUM,
Beckenham.
"Marked by candour, common sense, and moderation . . . likely to become the standard text-book."—*British Medical Journal.*
London: J. & A. CHURCHILL,
7, Great Marlborough Street, W. 1.

Price 2s. 6d. net (postage 3d.).
DIAGNOSIS AND TREATMENT
IN CASES OF
OTITIS MEDIA
(MASTOID DISEASE).
Saving the Hearing of the Discharing Ear with Perforated Drumhead.
By CHARLES J. HEATH, F.R.C.S.Eng.,
Consulting Aurist Metropolitan Asylums Board, Late Surgeon Throat Hospital, Golden Sq., London.
London: BAILLIÈRE, TINDALL & COX,
8, Henrietta Street, Covent Garden, W.C. 2.

FORMS FOR MEDICAL CERTIFICATES
of incapacity for work for use by
PRIVATE DOCTORS FOR NATIONAL HEALTH INSURANCE
To be obtained from the Offices of the BRITISH MEDICAL ASSOCIATION, 429, Strand, W.C. 2.
Price 6d., post free.
Each 6d. Book of Forms contains 50 Certificates.

MORE SECRET REMEDIES
(SECOND SERIES)
What they cost and what they contain.
Price 1s. 6d., post free.
BRITISH MEDICAL ASSOCIATION, 429, Strand, W.C. 2.

IN THE PRESS. For early Publication.
A VISION OF THE POSSIBLE
What the R.A.M.C. Might Become.
An account of some of the Medical Work in Egypt; together with a constructive criticism of the R.A.M.C.
By JAMES W. BARRETT, K.B.E., C.B., C.M.G., M.D., M.S., F.R.C.S.(Eng.), Lt.-Col. R.A.M.C. (Temp.), lately Lt.-Col. A.A.M.C. and A.D.M.S. Australian Force in Egypt; Member of Council and Lecturer on the Physiology of the Special Senses in the University of Melbourne, &c.

NOW READY. By the same Author and Lieut. P. E. DEANE, A.A.M.C., &c.
THE AUSTRALIAN ARMY MEDICAL CORPS IN EGYPT.
An Illustrated and Detailed Account of the Early Organisation and Work of the Australian Medical Units in Egypt in 1914-1915.
With 34 Plates and 3 Maps. Demy 8vo. 12s. 6d. net
"A well illustrated account of the admirable work done in Egypt. . . . The authors tell their story simply and unaffectedly, keeping strictly to their subject."—*The Times Literary Supplement.*
"Interesting as a story of human effort in time of stress."—*British Medical Journal.*

JUST PUBLISHED. In Two Volumes. Demy 8vo. 25s. net; postage 9d.; abroad 1s. 5d.
By Sir JAMES W. BARRETT.
THE TWIN IDEALS:
An Educated Commonwealth.
Essays and papers dealing with Medical, Educational, Public Health, Social and Political Subjects.
"This highly interesting work . . . a number of illuminating articles . . . no stodginess, but instead a good deal of very pleasant entertainment."—*Saturday Review.*

IN THE PRESS. By the same Author.
With 24 Plates and Three maps. Demy 8vo.
THE WAR WORK of the Y.M.C.A. in EGYPT
With a Preface by Gen. Sir E. H. H. ALLENBY.
H. K. LEWIS & Co. Ltd.,
136, Gower Street, London, W.C. 1.

JUST PUBLISHED. Cloth. 10s. 6d. (net); postage, 6d.
HYPNOTIC SUGGESTION
AND
PSYCHO-THERAPEUTICS
By A. BETTS TAPLIN, L.R.C.P. & L.M.(Edin.), Member of Council and late President of the Psycho-Medical Society of Great Britain.
LITTLEBURY BROS., 3, Crossball Street, Liverpool.
SIMPKIN, MARSHALL & Co., Ltd., London.

Fourth Edition. Price 4s. 6d. net.
BLOMFIELD'S ANÆSTHETICS.
"A truly excellent manual."—LANCET.
BAILLIERE, TINDALL & COX,
8, Henrietta Street, Covent Garden, W.C. 2.

OXFORD MEDICAL PUBLICATIONS.
JUST PUBLISHED.
OPERATIVE TREATMENT OF CHRONIC INTESTINAL STASIS.
By Colonel Sir W. ARBUTHNOT LANE, Bart., C.B. A.M.S., Consulting Surgeon to Guy's Hospital, and to the Hospital for Sick Children, Great Ormond St.
FOURTH EDITION, Revised and Enlarged.
Large Demy 8vo. 340 pp., with 133 Illustrations.
Price, 20s. net.

LICE AND THEIR MENACE TO MAN
By Lt. LLOYD, Lieut. R.A.M.C (T.),
Hampstead Military Hospital; Chief Entomologist in Northern Rhodesia. With a Chapter on "Trench Fever," by Major W. BYAM, R.A.M.C.
Demy 8vo. Illustrated. Price, 7s. 6d. net.
HENRY FROWDE AND HODDER & STOUGHTON,
Oxford Press Warehouse, Falcon Sq., London, E.C.1.

By FRANK KIDD, F.R.C.S.,
Surgeon to the London Hospital, and Surgeon-in-Charge of Genito-Urinary Department, London Hospital.
COMMON DISEASES OF THE MALE URETHRA.
Being a Course of Lectures delivered at the London Hospital, designed to assist those who may be starting Genito-Urinary Clinics.
With numerous Illustrations and Appendices.
5s. 6d. net.
"The author is always thorough and practical, and those who read this book will be astonished at the wealth of really valuable suggestions which it contains."—*The Prescriber.*
By the same Author.
URINARY SURGERY: A Review.
7s. 6d. net.
LONGMANS, GREEN & CO.,
39, Paternoster Row, London, E.C. 4.

BY C. O. HAWTHORNE, M.D.
STUDIES IN CLINICAL MEDICINE
Price 6s. net.
"A valuable miscellany of clinical studies."
—*Edin. Med. Journ.*
"Covers the ground of clinical medicine in an able manner."—*Canada Lancet.*
"Should be in the possession of every general practitioner."—*Prescriber.*
BALE & DANIELSSON, Gt. Titchfield Street, W. 1.

By W. SAMPSON HANDLEY, M.S., F.R.C.S.
ILEUS DUPLEX.
AN ACCOUNT OF THIS DANGEROUS COMPLICATION OF APPENDICITIS, AND OF ITS TREATMENT.
(Hunterian Lecture, 1915)
With Coloured Plate. 2s. 6d. net.
Bristol: J. WRIGHT & SONS, LTD.
London: SIMPKIN & Co., LTD.

For Invalids, Dyspeptics and the Aged.

The 'Allenburys' DIET

Invaluable in Sickness and Convalescence.

TITLE IMPORTANT

The "Allenburys" DIET is a complete food chiefly intended for Adults, and is *quite distinct* from the "Allenburys" Foods for Infants. It is quickly prepared, exceptionally palatable, easily digested and wholly nourishing.

COMPOSITION & PREPARATION

The "Allenburys" DIET is made from pure, rich, full-cream milk and whole wheat, both ingredients being partially pancreatised during the process of manufacture. It needs boiling water only to prepare it for use.

ANALYSIS

Fat	15·4
Proteid	15·2
Soluble Carbohydrate ...	47·2
Starch	15·7
Mineral Matter	4·5
Moisture	2·2

Caloric Value of the "Allenburys" DIET when prepared ready for use:

Fat	25·8
Proteid	10·4
Carbohydrate	42·9

INDICATIONS FOR USE

In all Gastric conditions where it is found that curd is not digested, Gastritis, Gastro-Enteritis, Gastric Catarrh, Gastric Ulcer, Gastric Influenza, Obstinate Vomiting. In all Acute Disorders. Before and after Surgical Operations. In Convalescence, Gouty Dyspepsia, Insomnia, (taken last thing at night it promotes refreshing sleep and digestive rest). Neurasthenia. All forms of Tuberculosis. In Senile Disorders of the Digestion. When pure milk is not obtainable, viz., on Board Ship, in Tropical Countries or Distant Lands, or whenever a light nourishment is required. For the Invalid, Dyspeptic, and the Aged it is an essential nutrient.

ADVANTAGES

Most invalids' foods require cow's milk to be used in their preparation; this involves much time and careful mixing to avoid the presence of burnt milk or lumpiness—common characteristics of foods so prepared. The "Allenburys" DIET does not require cow's milk to be added. By the simple addition of boiling water a complete food is produced that is smooth to the palate and pleasant to the taste. The "Allenburys" DIET can be taken for prolonged periods without any distaste arising. These distinct advantages are of immense service in the work of a busy hospital or understaffed sick-room.

MANUFACTURED BY

Allen & Hanburys Ltd., Lombard St., London, E.C. 3.

Prices: In sealed tins 2/3 and 4/6 each.

The 'Allenburys' DIET

SOME POINTS ABOUT BONE GRAFTS.

[WITH SPECIAL PLATE.]

BY

LIEUT.-COLONEL W. I. DE C. WHEELER, F.R.C.S.I., R.A.M.C.,

SURGEON, MERCER'S HOSPITAL, DUBLIN.

FOUR years of war has provided such a plethora of material for the study of bone-grafting operations that it is possible for surgeons to survey the field from the standpoint of considerable experience. Heretofore discussions about bone grafting have centred mainly round theoretical and academic questions, such as the rôle of the periosteum in the osteogenetic process, and the ultimate fate of the graft in its new position, the all-important clinical standpoint receiving but scant recognition.

So far as the osteogenetic power of periosteum is concerned, the controversy largely appears to hang round the point, What is meant by the periosteum? If merely the fibrous sheath which surrounds bone, then the periosteum is but a limiting and vascularizing membrane; if, on the other hand, the cambium or epiosteum layer lying between periosteum and bone, and rich in osteoblasts, is included as part of the periosteum, then most certainly the periosteum plays an important part in the production of bone. This bone-producing layer, lying between the periosteum and the surface of the bone, clings in children to the periosteum, whereas in adults it appears to belong more properly to the bone, and, in the absence of trauma or inflammation, to be inseparable from it.

If the periosteum is preserved, with its clinging osteoblasts, as in the case of subperiosteal resection of bone in a child, new bone will be formed with mathematical accuracy in every case. In adults subperiosteal resection may or may not be followed by new bone formation, the result apparently depending to a large extent on whether or not the osteoblasts are detached from the bone in the process of separating the periosteum.

From a practical point of view absence of the periosteum from an implanted bone graft probably means slower vascularization and a more prolonged convalescence for the patient. The retention of periosteum with the graft is not essential for success, but appears to play a decided part in the formation of an involucrum of new bone, which is seen with comparative regularity round a graft a few weeks old. Periosteal covered grafts are more permanent, and less likely to be absorbed.

Murphy and others held that the graft was nothing more or less than a scaffold, which is replaced by new bone. When the graft was contacted with living bone, the Haversian vessels permeated the Haversian canals of the graft, and carried with them osteoblasts and osteoclasts. The osteoblasts made good the defects in the graft produced by the activity of the osteoclasts. Thus the osteoblasts produces and inserts a new brick *pari passu* with the demolishing of the old structure by the osteoclasts. That the graft is not a mere scaffolding removed by the action of the osteoclasts and replaced by the activity of the osteoblasts, but is really viable and inherently carries its own osteogenic powers, becomes obvious under certain pathological conditions.

If a fracture occurs, the result of accident, the graft unites by the formation of callus, by a process simulating the repair of normal bone, and if a graft becomes infected, and the infection is not sufficiently severe to kill it outright, then an involucrum and sequestrum may be formed. In other words, almost from the time of insertion, a graft behaves in a manner identical with ordinary bone.

Sir Robert Jones illustrates a case of bone graft introduced to replace a tibia lost from disease. The graft broke near the centre, but subsequent *x*-ray photographs demonstrated a very definite formation of callus at the site of fracture.

Experience teaches many interesting points in connexion with the surgery of bone grafting. Ruin is not inevitable if accidental infection follows the operation, either through error of technique or the result of latent sepsis. A graft will often survive all but the streptococcal and other severe infections, and a bacteriological investigation should be made of the pus, in order to gauge the prognosis. Technique should approach perfection in every surgical operation, but should infection occur, or from the nature of things be inevitable, a bone graft will withstand the assault in a surprising manner, and the end result may be admirable. (Figs. 3 and 4.) In proof of this we have only to watch the completely separated fragments of bone in a compound "ploughed" fracture the result of gunshot wound, and see the fragments not only remaining viable, but rapidly consolidating with the fractured ends during repair. It is not true to suppose that bare bone is of necessity devitalized and will end in sequestration in a septic case, and the same observation applies to a bone graft. Hence the golden rule not to remove loose fragments in the early treatment of septic fractures, nor disturb a bone graft because unexpected infection follows the operation.*

In fifteen cases of Albee's operation for Pott's caries during the last five years the wound twice became infected. In one case, a child seen by Professor Osgood when visiting Dublin, the graft protruded through the lower angle of the wound for some weeks, without any sign of local inflammation in the soft tissues. Eventually the protruding portion was removed with bone pliers, and the skin at once healed across the gap, leaving the main portion of the graft undisturbed. This case recovered rapidly, with the graft firmly consolidated *in situ*.

In the second case, a very thin young adult, a pressure sore developed from insufficient padding of the frame on which the patient was placed after operation. The lower third of the graft became exposed, and the wound suppurated freely. In twelve months' time a sequestrum was thrown off, and the wound healed. *X*-ray photographs showed the graft *in situ* and firmly fixed to the diseased segment of the spine.

The first thought of the surgeon must be how to fix the graft in its new bed and by what method the limb is to be immobilized immediately after operation. A small amount of movement does not delay union in a simple fracture, as evidenced by the rapid repair of a broken rib or jaw, but the slightest mobility in a bone graft may make all the difference between success and failure.

In planning the line of the incision there will be no difficulty in dealing with easily accessible bones, such as the ulna and tibia, but in the case of the humerus and radius real respect must be paid to anatomical structures. Cases operated on previously, and exhibiting many scars, require ingenuity in planning the operation, so as to avoid, *inter alia*, the musculo-spiral and posterior interosseous nerves. The best plan is to expose the bone in its most easily accessible portion and then to extend the dissection by keeping under the periosteum, or as close to the bone as possible. The less the muscular attachments are interfered with the more rapidly will the osteogenetic process be established. Ruthless stripping of the bone must be avoided.

In old ununited fractures the difficulty at once arises of how to prepare a bed for the graft in the presence of, perhaps, two or three inches of sclerosed avascular bone. Complete resection often cannot be done without undue sacrifice of length of the limb. In such cases reliance may be placed on a long stout graft extending for a considerable distance above and below the sclerosed area, and an attempt made to create new vascular channels by drilling holes and reaming out a new medullary cavity before placing the graft in position. (Fig. 7.)

A long stout inlay graft is most likely to succeed, but it should be remembered that the recipient bone in the critical area—that is, the region of the fracture—is unsuitable soil; osteogenesis and thickening of the graft may fail, and the solution of continuity reappear on absorption of the graft many months after operation. Radical shortening of the bone is the only remedy if grafting fails, and in the case of the humerus gives a good functional result. The operation should for choice take the form of "the step" coaptation recommended by Hey Groves.

In old cases a sliding graft, taken from above or below the site of fracture, must not be used; the lower or upper end of a graft so taken would consist of sclerosed bone, avascular and devitalized by prolonged inflammatory changes. Sliding grafts should be reserved to bridge a fracture in recent simple cases, and even then should be

* The practice of Leriche and others of freely removing loose fragments subperiosteally in early cases is to be condemned in view of late results, unless the method is limited to those violently septic cases which would end in amputation without drastic sacrifice of the injured bone.

sparingly employed; they are frequently too short and insecure.

The intramedullary peg is condemned by many, but it provides the simplest form of bone graft, and in the late J. B. Murphy's hands it gave excellent results, the peg becoming firmly incorporated with the bone into which it was inserted. In one of my cases, an ununited fracture of the humerus of eight years' standing, the upper portion of the peg failed to unite, and gradually formed a species of ball-and-socket joint within the medullary cavity, but there was firm incorporation of the lower end of the graft with the recipient bone. At a second operation, three months afterwards, it was found impossible to remove this portion of the graft without the free use of the chisel.

There is one obvious difficulty in the introduction of a peg graft, for if half be driven into the medullary cavity of one fragment it is impossible to complete the introduction of the other without undue traction of the limb. To overcome this difficulty, the end of the graft which protrudes from the medullary cavity of one fragment should be laid in a groove cut in the other during traction of the limb. When the traction is relaxed the end of the peg glides past the groove into position. The alignment is of necessity perfect.

It must be remembered that overstrenuous traction of the arm in a case of ununited fracture of the humerus will produce transient musculo-spiral paralysis, and give rise to anxiety for two or three months. The peg graft is admirable if it were not for the real danger of fracture during convalescence. (Fig. 6.) This accident has occurred over and over again notwithstanding the greatest care in applying splints and plaster dressings. Owing to this liability to fracture, the use of a peg graft may with advantage be confined to cases of fracture or defect in the bones of the forearm (Figs. 1 and 2), and more stable lateral inlay grafts be reserved for the repair of the femur and humerus.

Injury to the radius or ulna is followed often by pronation deformity, the correction of which is an important part of the preliminary treatment. An intramedullary peg in the radius will not be disturbed by the coaxing of the lower fragments into a supinated position, although, whenever possible, every deformity should be corrected before operation is undertaken. When an inlay graft is employed it is a simple matter to lay the upper end in a groove of the proper dimensions and then push it for a short distance into the medullary cavity above; but in this case the lower end may tend to spring away from the lower fragment, and some means must be adopted for its fixation. Surrounding the bone by two or three heavy catgut ligatures tightly tied round the graft suffices in most cases, provided the rigid fixation of the limb is afterwards ensured.

By some, reliance is placed on the rigid fixation of the graft *in situ* by mechanical aids, and early movements of the limb encouraged to stimulate the activities of the bone (so well seen in children) according to Wolff's law. By others the graft is so arranged that success entirely depends on the fixity supplied by the splint or plaster cast, and no movement is allowed for at least three months. All are agreed that unless the graft lies in its bed incapable of movement the operation is certain to fail.

In the hands of Lane, Hey Groves, and others, as might be expected, excellent results follow the use of plates, bolts, and screws in combination with grafts. This procedure, however, prolongs and complicates the operation, and I am frankly afraid of disappointments in attempting too much. Bone nails can be readily made with the lathe and appliances provided with the Albee electro-motor saw, and the graft can be thus secured in position. It is fascinating but tedious work. I have twice fixed the graft successfully with a series of bone nails, but the operation appeared to me to be unduly prolonged. By making the graft a tight fit for the groove and hammering it into position reasonable fixation can also be secured.

In all my cases (except two) the graft, consisting of periosteum, compact bone, endosteum, and marrow, was taken in the orthodox manner from the subcutaneous surface of the tibia by means of Albee's twin electro-motor saw. In the two cases—one a congenital dislocation of the hip, and the other caries of the spine with much deformity—a rib transplant was found most suitable in size and shape.

A note of warning is necessary regarding fracture of the tibia from which a graft has been taken. This may occur some months after operation. As a precautionary measure a light plaster casing should be employed, and the use of crutches encouraged until strength of the leg is assured.

Hey Groves expresses the thought of most workers in this branch of surgery when he states that his "feelings are those of disappointment and hope—disappointment that the proportion of successes has been so small, and hope that by the experience gained one may be able to avoid causes of failure, which are seen to be so obvious, and therefore so possible of evasion."

From the above remarks, based on a study of thirty cases, it may be concluded that—

1. Whatever the histological rôle the clinical usefulness of a bone graft is not affected.

2. The final success of bone grafting in cases in which a gap is bridged depends upon the operation of Wolff's law (Fig. 5)—that is, the graft, stimulated by strains and stresses, changes its internal architecture and external conformation until the required strength is attained. In other words, "the amount of growth in a bone depends on the need for it" (Murphy).

3. The periosteum should be left on the graft, because, although not essential, it is the medium through which new blood vessels enter the graft and the surrounding structures. Furthermore, in removing the periosteum superficial layers of osteoblasts may be sacrificed. A periosteum covered graft is less likely to become rapidly absorbed.

4. To provide the necessary strains and stresses it is advisable to allow the graft to functionate as early as possible, but in most cases preliminary fixation for three months is essential.

5. In old ununited fractures with false joints the bone in the critical area (near the site of fracture) is sclerosed and avascular, and makes an unsuitable soil for that portion of the graft in contact with this area. Growth in the graft is impeded by the surrounding sclerosis. Dense sclerotic bone has no osteogenetic power.

6. In such cases a periosteal covered graft, instead of exhibiting osteogenetic powers and responding to Wolff's law, may become attenuated and absorbed or break in the critical area five or six months after operation.

7. In the same class of case very prolonged fixation is particularly unfavourable to osteogenesis, to the establishment of blood supply, and bony union. Early movements and the bearing of mechanical stress and strain, on the other hand, may lead to yielding of the graft and failure. The problem is a difficult one in the case of the humerus or femur, where strength is essential from the commencement of treatment, but may be solved by wide resection of the sclerosed bone, and resignation on the part of the patient to a short limb.

8. But for slightly slower osteogenetic powers, and a real tendency to fracture, the intramedullary peg is effective. This method of bone grafting is satisfactory in the case of the radius and the ulna.

9. In the case of the humerus and femur, long stout inlay grafts give the best results. Sliding grafts should only be employed in simple and fresh cases.

10. The bone graft has inherent bacteria-resisting properties.

11. Absolute fixation of the graft in its bed, either as part of the operation, or afterwards, by splints or plaster, is essential to success.

12. Bone grafting for spinal caries is followed by more uniformly successful results than is seen elsewhere. This is to be expected, since both the graft and the recipient bed (in the region of the spinous processes) consist of healthy bone.

13. As in the operation of tendon transplantation and nerve suture, the operation of bone grafting should be preceded by correction of any existing deformity and by the freeing of adhesions in neighbouring tendons and joints.

ON the initiative of Professor Carlo Besta, director of a neurological centre in Milan, an institute for sufferers from wounds of the brain is to be established in that city. Already £7,200 has been subscribed for the purpose.

FIG. 1.—Bones of forearm on admission. Great angular deformity and shortening.

FIG. 2.—Showing reconstruction of the forearm shown in Fig. 1 by resection of bone, plate, and wires *en bloc*, and bridging of gaps with intramedullary pegs. The radial peg increased in diameter to size of normal radius after six months.

FIG. 3.—Gun-shot wound of lower end of humerus before operation. Temporary musculo-spiral paralysis disappeared *pari passu* with the healing of the wound three months after injury.

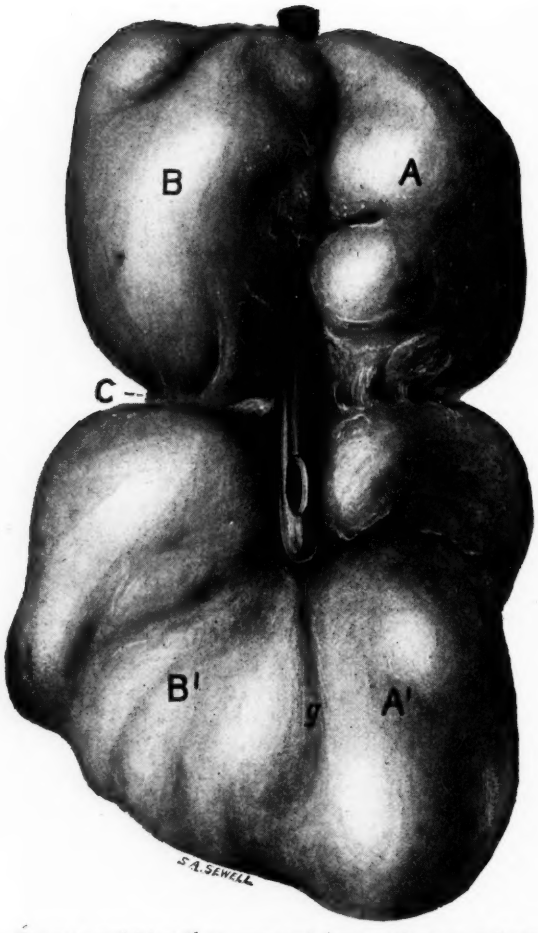
FIG. 4.—After operation. The introduction of a peg graft four months after healing was followed by lighting up of latent sepsis in the old wound. The graft survived, firm union followed, with full movements at the elbow-joint.

FIG. 5.—Union of fibula and tibia. Note thickening of fibula, the result of weight bearing. Good functional result.

FIG. 6.—Illustrating fracture of peg graft in old fracture of humerus. These cases should be treated by shortening and inlay grafts or the step operation.

FIG. 7.—Long inlay graft in an ununited fracture of the humerus of eight years' standing. Six months after operation there was absorption of the graft in the "critical area" and failure of union.

SIR PETER FREYER: TOTAL ENUCLEATION OF THE PROSTATE.



Prostate weighing 8¼ oz. removed from patient aged 79 (Case 1,091). A, Right lobe. B, Left lobe. A' B', Outgrowth in the bladder, springing equally from both lobes, the furrow *g* showing the posterior commissure of prostate. The neck C was caused by the grip of the upper margin of the prostatic sheath, or recto-vesical fascia, and sphincter muscle of bladder.

TOTAL ENUCLEATION OF THE PROSTATE.

A FURTHER SERIES OF 550 CASES OF THE OPERATION.

[WITH SPECIAL PLATE.]

BY

COLONEL SIR PETER J. FREYER, K.C.B., M.D., M.Ch.,

SURGEON TO ST. PETER'S HOSPITAL; CONSULTING SURGEON TO THE EASTERN COMMAND AND TO QUEEN ALEXANDRA'S MILITARY HOSPITAL.

SEVENTEEN and a half years have now elapsed since, in a lecture published in the JOURNAL of July 20th, 1901, I placed before the profession at large a full description of my operation of total enucleation of the prostate for radical cure of enlargement of that organ, illustrating my method by details of four cases successfully performed by me. Since then numerous papers* and lectures of mine have been published, chiefly in the JOURNAL and in the *Lancet*. In the earlier papers I recorded complete details of every one of my first 110 instances of the operation. Later, as each paper dealt with scores and then with hundreds of cases, I had to confine details to special instances illustrating some novel or important feature of the operation. Finally, in the JOURNAL of October 5th, 1912, I reviewed 1,000 cases of the operation performed by me. Since the outbreak of the war the absorbing interest attaching to communications connected with the wounds and diseases of our fighting forces have hitherto deterred me from encroaching on the limited space of our medical press. I have now completed a further series of 550 cases of the operation, and in the present paper I propose reverting to my practice of emphasizing certain aspects of the procedure by illustrative cases, dwelling particularly on its employment in advanced old age and in those conditions in which it is desirable to divide the operation into two stages—namely, (1) a preliminary suprapubic cystotomy for drainage of the bladder, and (2) enucleation of the prostate at a subsequent date.

When the operating surgeon is consulted with a view to enucleation of the prostate he will not infrequently be confronted by the fact that the patient has drifted into a stage in which the primary disease—the enlargement of the prostate—is complicated by other conditions which have undermined his constitution and seriously diminished his vital powers, thus rendering the undertaking of an operation of this magnitude a very serious matter. In cases of this kind the question will arise as to whether or not it is advisable to divide the operation into two stages—(1) a preliminary suprapubic cystotomy for free drainage of the bladder with resulting relief to the backward pressure on the kidneys, and (2) enucleation of the prostate at a subsequent date, when the kidney functions are re-established, the cystitis has disappeared, and the general health of the patient has improved. It would be extremely difficult, if not impossible, to lay down any general classification of cases in which this procedure should be had recourse to, but it is hoped that the illustrative cases that follow will help towards forming a decision on this point.

There are, however, three definite conditions in which I consider that, as a rule, it is advisable to drain the bladder before removing the prostate:

1. When the bladder is very septic, generally complicated by the presence of phosphatic calculi, and particularly when there is reason to believe that the kidneys are secondarily affected, as indicated by recurrent attacks of rigors and pyrexia with emaciation and debility of the patient.

2. When, no catheter having been previously employed, a patient consults you for intensely frequent but painless micturition with dribbling of urine, the result of an over-distended bladder. The urine in such cases will be pale and of low specific gravity (from scantiness of urea), and the patient will complain of intense thirst, with probably headache and pains in the limbs; the tongue will also probably be red, dry, and fissured, and he will complain of a bitter taste—symptoms which indicate incipient uraemia. The disease will have advanced insidiously and the patient, who will probably have informed you that he is passing urine too freely, will be astonished when on introducing a catheter one or two pints of urine are drawn off, and as much more left behind. The bladder should in cases of this kind be slowly drained by tying in a catheter of narrow calibre, and suprapubic cystotomy performed in two or three days' time, the enucleation of the prostate being deferred for a fortnight or longer, till the kidneys have regained their normal functions and all the uraemic symptoms have disappeared. The procedure here indicated is that which I almost invariably follow; but when a catheter of large calibre tied in the bladder is well borne, this method of drainage of the bladder and giving relief to the backward pressure on the kidneys may be tried; and, if the uraemic symptoms soon pass off, the urine regaining its normal specific gravity, the preliminary cystotomy may be dispensed with.

3. When rigors and pyrexia, followed by cystitis, set in after the introduction of a catheter for the first time—and this is an event that may occur in the hands of the most experienced surgeon and with the most scrupulous aseptic precautions—and urgent relief of the symptoms is required. It is never advisable to remove the prostate during an acute attack of cystitis. The catheter should be introduced frequently, or tied in if its introduction is difficult and painful, and the cystitis subdued by the usual remedies before operation is undertaken. If, however, it is found that this procedure is badly borne and cannot be followed, the bladder should at once be drained suprapubically, the enucleation of the prostate being postponed till the cystitis has disappeared and the patient has regained strength.

Personally, I do not favour the division of this operation into two stages except when absolutely necessary, as indicated by the fact that amongst 1,550 prostatectomies performed by me the two-stage operation has been undertaken in only 73 cases, or 4.75 per cent. I see no advantage in this procedure in ordinary straightforward cases, which are the general rule, and many disadvantages. Apart from the extra period the patient has to remain in bed, it is much more difficult to enucleate the prostate when deferred for ten days or longer after the cystotomy, for the tissues around the suprapubic wound will have become tense and rigid from the plastic lymph thrown out, with the result that the abdominal wall will not be soft and yielding to the hand, the finger of which is in the bladder for the purpose of the enucleation, and there will, in consequence, be difficulty in reaching the distal aspects of the prostate.

CASE 1,065.

On April 13th, 1913, I was urgently summoned to Brighton by Dr. Donald Hall to operate on a gentleman, aged 81, who had suffered from the usual prostatic symptoms for ten years, culminating in retention of urine twelve days previously. Since then he had been entirely dependent on the catheter, the introduction of which gave rise to much pain and was attended by severe haemorrhage at times.

Assisted by Dr. Hall and Mr. Ionides of Brighton, I forthwith enucleated the prostate suprapubically, a pear-shaped, symmetrical specimen, the median outgrowth in the bladder being only the size of a pea. The weight of the growth was about 4 oz., and the operation was completed in three minutes. Recovery was slow but complete, and the patient has had no urinary troubles of any kind since. On December 29th, 1918, he wrote to me: "I am thankful to report good health on this my 86th birthday."

CASE 1,083.

This gentleman, aged 75, consulted me on May 21st, 1913, on the advice of Dr. Courchet, St. Raffael, France, and of Dr. Gordon Pollock, Warlingham. In February, 1912, he had an attack of whooping-cough in the south of France, and at the time felt his clothes tight from distension of the abdomen. In June of the same year he passed much blood in the urine. Towards the end of that year he had dropsy in his lower limbs, and later on uraemic symptoms. On January 9th, 1913, Dr. Pollock by the catheter drew off 2½ quarts of urine containing blood, and since then the patient had been entirely dependent on the catheter, which had to be employed every four hours. Subsequently he consulted three surgeons in Paris, where he was laid up in a surgical home, and a catheter tied in for a week; this had the effect of diminishing the quantity of urine secreted from 4 to 2 quarts, evidently owing to the relief to the backward pressure on, and physiological rest afforded to, the kidneys. He also had his bladder washed out daily with boric and nitrate of silver lotions.

I introduced a catheter and drew off 8 oz. of pale-coloured urine, of specific gravity 1010, containing pus, but with no kidney albumin. The patient was thin but wiry, the heart being irregular and intermittent. The prostate was much enlarged.

* BRITISH MEDICAL JOURNAL, February 1st, July 26th, November 8th, 1902; April 18th, July 4th, October 17th, 1903; May 21st, October 20th, 1904; May 20th, October 7th, 1905; March 9th, October 5th, 1907; October 2nd, 1909; October 5th, 1912. *Lancet*, July 23rd, 1904; February 25th, 1905; May 1st, 1909; April 8th, 1911; April 12th, 1913.

On May 29th, Dr. Pollock assisting, I enucleated the prostate entire in three minutes. The gland, which weighed 3 oz., was hard at the centre of each lobe, but pathological examination showed that it was adenomatous and simple. On June 11th some urine was passed per urethram; by June 24th the suprapubic wound was healed, and the urine retained and passed naturally. The bladder, however, did not completely empty itself. On July 24th the patient left for the country, with instructions to pass the catheter at first daily, and then at more distant intervals, to completely empty the bladder, and thus enable it to regain its tone, which it had lost through prolonged overdistension. In the course of a few months the bladder regained its power of expelling the whole of the urine. On June 10th, 1916, this gentleman's wife wrote: "My husband is very well and bright, and works as hard as ever"; and on December 15th, 1918, the patient wrote: "The result of the operation changed my life from one of misery to one of great comfort; my health is such as I ought to be thankful for at fourscore years. I am out every day that is possible. I sleep well, seldom leaving my bed more than once instead of twenty times."

CASE 1,091.

On June 27th, 1913, I saw a gentleman, aged 79, who had come from New Zealand to consult me, on the advice of Dr. Gilbert Mirans, Wellington. Prostatic symptoms, gradually increasing, had existed for ten years, and for the last four he was entirely dependent on the catheter. The largest catheter that could be introduced was a No. 4 English scale, and this only by stiffening it by means of a metal stylet, for, in addition to the prostatic enlargement, a stricture of the urethra was present. The introduction of the catheter was attended by much pain and frequently by bleeding; it had to be employed six times daily, and on each occasion it took half an hour to empty the bladder owing to the small calibre of the instrument. The prostate was felt bimanually to be greatly enlarged, particularly in the bladder. The general health was poor, the heart intermittent and irregular, the feet swollen, the urine contained pus and albumin, and the patient suffered from troublesome psoriasis.

On June 30th, Dr. W. E. Herbert of Wellington, N.Z., being present, I performed an internal urethrotomy, and then enucleated the prostate entire with great ease. The operation was well borne and unaccompanied by shock, but was followed for twenty-four hours by vomiting of dark grumous matter, the pulse though irregular remaining strong. Convalescence was rapid; on July 15th some urine was passed by the urethra, and on July 26th the wound was dry, the whole of the urine being retained and passed naturally from this date. In the end of August, about a month after passing from under my care, the patient had a paralytic stroke, due, apparently, to his motoring fifty or sixty miles daily; but from this he recovered. On June 14th, 1914, he wrote from New Zealand: "I have no bladder trouble and, save for a weakness in the left leg, I am well in health, have a good appetite and enjoy sound sleep"; and on March 15th, 1915: "Not only has the removal of the prostate gland been a complete success but the psoriasis has disappeared."

The prostate from this case, which weighs 8½ oz., is shown in the figure (special plate). It is a remarkable specimen, one of the most interesting in my possession, presenting an enormous outgrowth in the bladder.

CASE 1,132.

The patient, aged 84, was admitted to St. Peter's Hospital, November 14th, 1913, with prostatic symptoms which had existed fourteen years; he had been dependent on the catheter for five years and was in great distress, almost worn out from pain and constant desire to micturate. The urine contained pus and mucus from chronic cystitis.

On November 19th I enucleated the prostate, weighing 6 oz. A rapid recovery ensued, the patient being discharged on December 22nd in fairly good health. On July 24th, 1916, the patient's wife wrote me: "My husband is enjoying very good health and has not the slightest return of the trouble for which you operated on him; he is taken for 70 instead of 86!" And on October 17th, 1918: "Everything is quite normal as regards the operation performed in 1913."

CASE 1,257.

This gentleman, aged 64, sent by Dr. W. G. Sargent, Padstow, Cornwall, I examined on June 29th, 1915. Prostatic symptoms had existed fifteen years, and during the last three years he was entirely dependent on the catheter, which had to be introduced every three or four hours. The urine contained much pus and blood, and was extremely offensive. The general health was extremely bad, the heart being intermittent and irregular, and the skin was of a bluish-grey colour, the result of septic absorption from the bladder. The temperature varied up to 102° F.

On July 1st I opened the bladder suprapubically and removed seven faceted phosphatic calculi, weighing nearly 3 oz. The prostate was extremely large, fully one half of it projecting in the bladder. As the patient was extremely weak, and suffering from sepsis, I postponed enucleation of the gland, and contented myself with temporary drainage of the bladder.

By July 6th the patient's health had vastly improved, the pyrexia had disappeared, and the urine was inoffensive, so, on July 7th, I enucleated the prostate, which weighed 8½ oz. The operation was well borne, and convalescence rapid, the wound being closed on July 23rd. On August 16th the patient returned to Cornwall, able to retain and pass his urine normally, and on August 18th Dr. Sargent wrote: "Such a result was beyond anything I anticipated, for the case had assumed a very grave aspect, and the general health was at a very low ebb." On July 2nd, 1916, a year after the operation, the wife wrote: "My husband has made a great recovery. He is free from pain and urinary troubles, from which, as you know, he suffered for many years"; and on August 1st, 1918: "My husband is in splendid health, and looks so well."

CASE 1,266.

Captain X., aged 72, sent by Dr. D. M. Davies, Aberayron, on August 4th, 1915, suffering from prostatic symptoms for four years; completely dependent on the catheter for six months; urine contained much pus and blood, and was very offensive. The bladder had been washed out twice daily for many weeks. The prostate presented in the rectum as a large, rounded, dense tumour, with median furrow, like the buttocks of a 7-months fetus. Bimanually it was felt as a large rounded movable tumour in the bladder, projecting above the pubes. The patient's general health was fair.

On August 6th, Lieut.-Colonel G. Bull, I.M.S., being present, I opened the bladder suprapubically, and found that about two-thirds of the bulk of the prostate lay in the bladder. It was gutter shaped, with the lateral lobes lying apart, the distorted urethra, carried by the growth up into the bladder, forming a deep vertical slit. I enucleated the gland, weighing 12¼ oz., entire, the operation lasting eight minutes. The incision in the abdominal wall was only 3 in. long and that in the bladder only 2½ in., the prostate being of the soft, compressible, adenomatous type, and being delivered from the bladder like an open bivalve. There was scarcely any bleeding, no shock, and the patient complained of no pain; in fact, as he repeatedly stated, he never felt the operation. The progress of the case was uneventful, the wound being closed on August 27th, and the patient returned home on September 9th in good health, able to retain and pass his urine as well as ever. On September 26th Dr. Davies wrote: "I am extremely pleased with the result of the operation. He is remarkably well and has good control of his sphincter." On December 13th, 1918, the patient wrote me: "I am glad to tell you I feel as well as when I was eighteen."

The prostate, a fine specimen, shaped like a small shrapnel shell, has been placed in the museum of the College of Surgeons, London.

CASE 1,274.

The patient, aged 48, was admitted to St. Peter's Hospital, September 20th, 1915, with the usual symptoms of enlarged prostate, which had existed six months, the most marked of which were great frequency of micturition and loss of control of the urine at night. The bladder was distended, containing about two pints of urine. The prostate was felt enlarged per rectum and bimanually, and of the usual adenomatous type. There was marked loss of flesh during the previous two months, and the patient's general health was very indifferent.

On September 22nd I enucleated the prostate entire in its capsule, a good specimen (now in the College of Surgeons Museum), weighing 1¼ oz., presenting a scoop-shaped lip in the bladder. On October 8th the patient was discharged, able to retain and pass urine normally but still in indifferent health. On August 10th, 1916, he wrote me: "I am delighted to tell you that I am at last in the best of health."

This (48 years) is the lowest age at which I have enucleated an adenomatous prostate, and only in four instances at this age.

CASE 1,281.

The patient, a fine old soldier, aged 84, who had served in the Crimean war, was admitted to St. Peter's Hospital October 3rd, 1915, suffering from prostatic enlargement and stricture of the urethra. Twenty years previously he had a stone crushed in the bladder. Eighteen months before admission he had retention of urine, and since then he was entirely dependent on the catheter. Owing to the stricture the size of the catheter was limited to No. 5 of the English scale. The urine contained pus and blood, but the patient's general health, considering his great age, was good.

On October 6th I dealt with the stricture by internal urethrotomy and then enucleated the prostate suprapubically. The gland, which weighed 2 oz., was very dense. A rapid recovery ensued, the patient being discharged on October 29th—twenty-three days after operation—retaining and passing his urine as well as he ever did. On July 23rd, 1916, the patient wrote me that he was in good health. Subsequent to the operation he worked as a recruiting sergeant. On December 27th, 1916, he came to see me; he was then in good health in his 86th year.

CASE 1,309.

This patient, a well known public man, aged 76, consulted me on December 21st, 1915, introduced by Dr. Douglas, Camden Road, London. The usual prostatic symptoms had existed only one year. There was intense frequency of micturition by day and night, but no pain or other discomfort. I found that the bladder was overdistended, reaching as high as the umbilicus, and on passing a catheter I drew off 35 oz. of urine, leaving a large quantity behind. The urine was pale, like water, the

specific gravity being only 1002; albumin *nil*. The prostate was considerably enlarged, bilobed and very dense at parts; general health indifferent.

Owing to the low specific gravity of the urine and insufficient action of the kidneys from prolonged backward pressure, I decided to drain the bladder in the first instance and defer to a later date the enucleation of the prostate.

The bladder was opened suprapubically on December 23rd and a large drainage tube inserted. The patient bore this comparatively slight operation very badly and was for some days in a very precarious condition. Then he rapidly improved, and on January 26th, 1916, I enucleated the prostate entire. It was adenomatous, pear-shaped, and weighed 2 oz. This second operation was well borne and convalescence was rapidly established, the patient leaving the surgical home on March 6th in fairly good health, retaining and passing his urine normally. I have met this gentleman on several occasions since, looking remarkably well and attending to his parliamentary duties. He has had no urinary troubles since. On September 25th, 1917, he wrote me: "I am enjoying very good health"; and on December 10th, 1918: "I am very well."

CASE 1,310.

On January 26th, 1916, I was called to see this gentleman, aged 67, in consultation with Drs. J. S. Part of Chiswick and T. H. Bishop of Bedford Park. For two years he had suffered from prostatic symptoms, with, latterly, intense frequency of micturition. Three days previously a catheter had been passed and 85 oz. of urine drawn off. The evening before I saw him it was found impossible to introduce the catheter. With considerable manipulation I managed to pass a No. 16 French *coudé* and draw off 82 oz. of urine containing much pus. The tongue was foul, the pulse weak, and the patient was wretchedly ill, unable to move on the couch on which he was lying. The prostate was felt per rectum to be very large and of the usual adenomatous type, but it could not be felt bimanually owing to the stoutness of the patient.

Owing to the large quantity of pus and albumin in the urine and the weak condition of the patient, I decided to drain the bladder suprapubically in the first instance, and to remove the prostate later on. The former operation I performed in a surgical home on January 27th. By February 7th the patient had wonderfully improved in health, so next day I enucleated the prostate, a fine specimen of the scoop-shaped pattern, very prominent in the bladder, and weighing 5 oz. The anaesthetic and operation were well borne. On February 29th the patient left the surgical home in fairly good health, able to retain and pass urine normally. On August 28th he wrote: "I am in better health than I have been for years, and have no trouble with my waterworks." On September 15th he called to see me in perfect health. I heard from him on December 12th, 1918, that he was in excellent health, and in the active pursuit of his profession.

CASE 1,358.

This gentleman, aged 85, consulted me August 2nd, 1916, on the advice of Dr. J. Uhthoff, Brighton. He had seen military service in the Indian Mutiny and Persian war, but had passed the greater portion of his life in South America. His prostatic symptoms dated back fifteen years, culminating in retention of urine a year ago, since when a silver catheter was passed twice daily by an attendant, latterly with much difficulty, pain, and bleeding. For the last three months he was practically confined to bed, but had to rise every hour or less for urination, which was attended by straining and scalding. The urine was of low specific gravity, 1008, and contained much pus and some blood. Three months previously he had a slight stroke of paralysis, accompanied by loss of speech for three days. He had double inguinal hernia. The prostate was large and adenomatous, and, though no stone was detected by the sound, I suspected the existence of one behind the prostate.

On August 7th I enucleated the prostate, which weighed 3½ oz., and found a small oval urate stone, weighing 22 grains, in the bladder. The operation, which lasted only three minutes, was well borne. Some urine was passed per urethram on August 17th, and the wound was closed on August 19th. The patient left the surgical home for Brighton on September 1st —twenty-five days after the operation—in fairly good health, able to retain and pass his urine normally. I saw him some months after in fairly good condition, untroubled by any urinary symptoms. I heard that he died some months later from heart and kidney troubles.

The rapidity of cure in this case, considering the great age and the debilitated condition of the patient, as well as the fact that the kidneys were affected, is, indeed, remarkable. I attribute success in such cases largely to rapidity in operating, thus reducing the time under the anaesthetic to a minimum.

CASE 1,429.

General H., aged 70, first consulted me in 1913, suffering from symptoms of enlarged prostate. Though the gland was considerably enlarged the symptoms were so slight that I refrained from passing a catheter, and advised postponement of any operative interference. He did not consult me again till June 6th, 1917. The symptoms had gradually increased in intensity, so that he had now to pass urine every hour and a half by day and night. A sterilized catheter was introduced and 12 oz. of residual urine drawn off. The prostate was felt bimanually the size of a large orange, and of the usual adenomatous type. Next day he had pyrexia followed by cystitis. The intense frequency of micturition and the pain caused by the introduction of the catheter were so great that I tied in the catheter; but this gave little or no relief, the inflamed bladder resenting the presence of the catheter. I therefore drained the bladder suprapubically on June 12th, but, owing to the fever and weak state of the patient, I postponed removal of the prostate. The temperature soon subsided and the urine became normal, and on June 25th I enucleated the prostate, which weighed 4 oz. The suprapubic wound closed on July 9th, and the urine was passed normally after that date. On December 4th, 1917, the patient wrote: "I am perfectly well; I feel that you have given me a new lease of life"; and on December 6th, 1918; "I am doing well, and have no trouble or discomfort."

CASE 1,477.

Gentleman, aged 82, seen at Ipswich February 28th, 1918, in consultation with Dr. E. Hollis, Woodbridge. Prostatic symptoms had existed for seven years. Catheter employed twice daily for last fortnight. Cystitis, with temperature 103° F., supervened after commencing the catheter, but this had now subsided, though the urine contained pus, and urination was painful. The general health was feeble. Assisted by Dr. Hollis, I enucleated the prostate in three minutes; weight 3 oz. The patient made an uninterrupted recovery, and on March 24th Dr. Hollis wrote: "The patient has done well, the general condition is good, and he intends to return home in a few days." On December 19th the patient wrote me: "I am quite recovered, and have had no further urinary troubles."

CASE 1,484.

C. F. C., aged 80, was admitted to St. Peter's Hospital, March 2nd, 1918, with acute retention of urine, the bladder being distended to the umbilicus, due to prostatic obstruction. He complained of thirst and headache, and the tongue was red, dry, and fissured, denoting incipient uraemia. A catheter was passed and tied in and the bladder slowly drained. On March 6th I performed suprapubic cystotomy for drainage of the bladder preparatory to prostatectomy at a later date. The uraemic symptoms gradually subsided and the patient's general state was so improved that on March 20th I was enabled to complete the operation by removing the prostate, which was adenomatous and weighed only 1¼ oz. The suprapubic wound was slow in healing, but was finally closed on May 6th. On May 11th the patient was discharged in fairly good health, able to retain and pass his urine normally. On December 11th, 1918, he wrote to me: "I am pleased to say that I feel remarkably well and have no set-back since leaving the hospital."

CASE 1,490.

Dr. McR., aged 80, consulted me on March 22nd, 1918, on the advice of Major A. Neve, R.A.M.C. Prostatic symptoms had been gradually increasing for three years, culminating in complete retention of urine the night before, when the catheter was passed and two pints of urine drawn off. Though he had since passed some urine naturally I drew off 32 oz., specific gravity 1008, with more than a trace of albumin. The feet were oedematous, the tongue glazed, dry, and fissured, and the patient was suffering from intense thirst. I sent him forthwith into a surgical home and tied in a catheter to drain the bladder continuously. This was well borne; the uraemic symptoms rapidly subsided and the general condition was so much improved that, on April 8th, Major Neve assisting, I enucleated the prostate, which weighed 1½ oz. and contained numerous minute calculi. The patient scarcely felt the operation, made a rapid recovery, and left the surgical home on May 3rd in excellent spirits, able to retain and pass urine as well as he ever did. On October 10th he wrote: "I am all right and have resumed my London engagements." I have recently seen him, in excellent health, untroubled by any urinary symptom.

In this case the overdistension of the bladder coming on slowly and causing backward pressure on the kidneys, resulting in the early symptoms of uraemia: there was no necessity for dividing the operation into two stages, as the tying in of the catheter was well borne, and the relief thus afforded enabled the kidneys to recover their normal functions, and the uraemic symptoms to disappear before undertaking the enucleation of the prostate.

CASE 1,501.

Colonel P., aged 80, consulted me on March 6th, 1918, on the advice of Dr. G. D. McReddie, Greenhithe. The usual prostatic symptoms had existed for twelve years. The residual urine contained pus and albumin. On May 13th, Dr. S. H. Curry being present, I enucleated the prostate, which weighed 2¼ oz., the operation lasting three minutes. An uneventful recovery ensued, the patient leaving the surgical home on June 28th, in good health, able to retain and pass urine normally. He called to see me on December 13th, 1918, in excellent health, untroubled by any urinary symptom.

The age in the 1,550 cases of total enucleation of the prostate now performed by me ranged from 48 to 90 years, the average age being 69; and the prostates removed weighed from ½ to 17 ounces.

There were in connexion with these operations 83 deaths, or 5⅓ per cent., the mortality diminishing from 10 per cent. in the first 100 to 3 per cent. in the last 200 cases.

There were 89 octogenarians between 80 and 90 years of age, and 13 bordering on this age, in their eightieth year. Amongst these there were 12 deaths, or 11¾ per cent.

In 274 instances the prostatic enlargement was complicated by the presence of stone in the bladder, mainly of the phosphatic variety, due to cystitis, the calculi varying in number from one to hundreds; and in one case, reported in the *Lancet*, April 12th, 1913, there were sixteen calculi weighing 8 oz. Amongst these 274 patients there were 21 deaths, or 7¼ per cent. I may draw attention to the fact that, though the operation in these cases involved a suprapubic lithotomy as well as enucleation of the prostate, the whole of the mortality has been accepted in connexion with the latter.

It will have been observed that in practically all the cases detailed in this paper—and they are typical of scores of others—the prostatic disease had been allowed to advance to such a degree that grave complications had supervened before surgical relief was sought. It is, of course, mainly amongst cases of this kind that a fatal result occasionally follows operation. I would, therefore, once more appeal to the profession at large to advise early operation, before the vital organs, and particularly the kidneys, become secondarily affected. When undertaken whilst the general health is sound and the kidneys unaffected there is scarcely any danger attached to this operation in experienced hands, even in advanced old age.

A NOTE ON THE STATE OF THE URETERS AND THEIR ORIFICES IN CASES OF GUNSHOT WOUNDS OF THE SPINE.

BY

COLONEL ANDREW FULLERTON, C.B., C.M.G., A.M.S.,

CONSULTING SURGEON, BRITISH EXPEDITIONARY FORCE.

ONE of the most frequent causes of death in cases of gunshot wounds of the spine is infection of the bladder and kidney, attributable in most cases to the use of the catheter for retention of urine. It is well known that obstruction to the urinary outlet is a predisposing cause of infection, and this state of affairs is present to a certain degree in spinal injuries. Fearnsides[1] points out that after gunshot wounds of the spinal cord complete retention occurs in practically every case, commencing from the date of injury and lasting for a variable time. During this period a lax condition of the bladder musculature as a whole is found, accompanied by a considerable amount of spasm at the neck of the bladder, and of the urethra. To the first stage of complete retention there succeeds, after days, weeks, or months, a second stage of periodic spontaneous micturition or of active reflex incontinence which is entirely involuntary.

It is important to ascertain whether any relaxation or paralysis of the ureters or their sphincters is present in view of the frequency of "ascending" infection of the kidney. If it could be demonstrated that incompetence of the uretero-vesical sphincter and dilatation of the ureter occurs it would be easy to understand the frequency of kidney involvement following on bladder infection. A few observations were made in 1916 with the object of clearing up this point, but for various reasons their publication was delayed. It has been assumed that ascending infection of ureters and kidneys may be due to paralytic relaxation of the ureteric sphincters,[2] and as my observations bear on this subject I have thought it well to record them so that they may be corrected or confirmed by those interested.

It is easy to see how regurgitation of infected bladder contents into the renal pelvis could take place if the uretero-vesical orifice and the walls of the ureter were paralysed or relaxed. The object of this article is to show that there is no evidence that such a state of affairs is present. Physiologists are familiar with the fact that the ureters can carry on their functions independently of the central nervous system by virtue of an intrinsic neuromuscular or muscular mechanism upon which their rhythmical movements depend, and this is to be expected as the ureter simply serves as a channel down which urine secreted by the kidney is propelled to the reservoir provided for its reception until a convenient opportunity offers for its discharge from the body. Elliott,[3] experimenting on the innervation of the bladder and urethra in animals, incidentally investigated that of the ureter, but could not find any proof of the control of its peristalsis by the sympathetic nerves. The spinal segments connected with the ureters are the tenth, eleventh, and twelfth thoracic (Head). Cases with injury at or above this region were therefore chosen for investigation.

CASE I.—*Cervical Region.*

Pte. K., wounded with high explosive, September 17th, 1916. Complete lesion of the cord at the level of the fifth cervical segment. Complete retention of urine. The patient had been catheterized. Cystoscopy, September 22nd, five days after injury. Intramuscular injection of indigo-carmine. Colour did not appear in half an hour, though ureters discharged clear urine in jets, with normal movements of the ureteral orifices. The blue colour of indigo-carmine came through later in the day and the urine remained tinted for twenty-four hours. A mild cystitis was present. The delay in the appearance of the dye was doubtless due to the serious general condition of the patient who died two days later. *Post-mortem* examination revealed complete lesion of the cervical cord.

CASE II.—*Upper Dorsal Region.*

Pte. G., wounded by bullet, August 22nd, 1916. Diagnosed as a complete lesion of the cord at level of fourth dorsal segment. The patient had been catheterized for complete retention. Cystoscopy, August 24th, two days after injury. Already there was extensive cystitis, with ecchymoses, which formed slate-coloured patches in places. Ureteral orifices buried in oedematous mucous membrane. Intramuscular injection of indigo-carmine. No colour at end of thirty-five minutes, when a second injection was given. Ten minutes later colour appeared at both orifices. The urine issued in jets, which were short and abrupt and not definitely finished off as in a normal case. The area round the ureteral orifice moved only slightly upon closure of the latter. The alteration in behaviour of the ureteral orifice was probably due to the swelling of the mucous membrane present. The jets were irregular in rhythm, the intervals varying on the right side from two to thirteen seconds, and on the left from twelve to thirty-eight seconds. There was no escape of urine from the ureteral orifices in the intervals between the jets.

CASE III.—*Mid-dorsal Region.*

Pte. W., wounded with shrapnel ball, August 27th, 1916. Diagnosed as a complete lesion of the cord at level of sixth dorsal segment. Complete retention of urine. Catheter twice a day. Evening temperature varied from 103° to 104° F. Cystoscopy, September 1st, four days after injury. Intramuscular injection of indigo-carmine. Coloured urine emitted ten minutes later. Very vigorous jets from both ureteral orifices, with normal movements of the latter. Rhythm very irregular, three minutes elapsing on one occasion between two successive jets. At other times the rate was much more rapid. A mild degree of cystitis was present.

CASE IV.—*Lower Dorsal Region.*

Sergeant K., gunshot wound in dorsal region. Admitted base hospital, August 16th, 1916. Diagnosed as a complete lesion of the cord at the level of the eighth dorsal segment. Complete retention of urine, for which the patient had been catheterized. Cystoscopy, August 18th, a few days after injury. Slight degree of cystitis. Ureteral orifices perhaps slightly patulous. Intramuscular injection of indigo-carmine. Twelve minutes later coloured urine appeared in jets which were not very vigorous. No leakage from orifices of ureters in the intervals between jets.

CASE V.—*Lower Dorsal Region.*

Pte. K., wounded by shell, June 25th, 1916. Diagnosed as a complete lesion at level of tenth dorsal segment. Complete retention for which patient had been catheterized. Cystoscopy, a few days after injury. Small punctate ecchymoses. Floating flecks of muco-pus. Cystitis. Ureteral orifices appeared to be patulous, but there was distinct systole and diastole of the uretero-vesical sphincter. Intramuscular injection of indigo-carmine. Eight minutes later coloured jets with a thin stream appeared at intervals of twenty seconds.

Indigo-carmine was used in these cases to study more easily the shape and size of the issuing stream and to ascertain if any leakage occurred through an incompetent valve.

CONCLUSIONS.

A study of the foregoing cases justifies the conclusions that in complete transverse lesions of the cord in the cervical and dorsal regions, examined a few days after injury:

1. Peristalsis of the ureters continues, as evidenced by the rhythmical discharge of urine rendered more visible by indigo-carmine.
2. Normal movements of the lips of the ureteral orifice take place, as evidenced by the visible systole and diastole present in all the cases.

3. The tone of the uretero-vesical sphincter is maintained and the valve is competent. This is shown by the shape of the jets, which demonstrates that the urine has been ejected against the resistance of a narrow opening, and by the absence of leakage in the intervals.

The irregularity in rhythm and in the amount of fluid ejected in some of the cases was probably due to alterations in the rate of renal secretion. It is well known that the peristaltic movements of the ureter are originated by the presence of drops of urine in its lumen. I have noticed similar irregularity in conditions quite unconnected with spinal injury.

PRACTICAL CONSIDERATIONS.

The observations just described have a practical bearing on the treatment of patients with retention of urine due to spinal lesions. In order to avoid the disasters likely to result from the use of the catheter, other methods of treatment (pending the establishment of spontaneous micturition) have been suggested by various surgeons. One is to allow the bladder to distend until overflow takes place through the urethra (paradoxical incontinence). The urine is received into a receptacle placed between the patient's thighs. A second is to endeavour by pressure in the suprapubic region, combined, perhaps, with counter-pressure by two fingers in the rectum, to overcome the resistance at the vesical outlet, and so to empty, partially at least, the bladder. The important point to consider here is whether such distension or pressure is likely to force urine through the uretero-vesical orifices towards the pelvis of the kidney. With this end in view the following observations were recently made.

CASE VI.—*Integrity of Uretero-Vesical Valvular Mechanism.*

Pte. J. K. was wounded by bullet in the lumbar region on October 22nd, 1918. He had complete retention of urine, for which he was catheterized from October 23rd onwards. Admitted to a base hospital October 29th. Examination showed loss of sensation below the level of the iliac crest and motor paralysis of the right lower extremity and of the left below the knee. Slight voluntary movement of left thigh. The urine contained pus, albumin, and a few red blood cells. Cystoscopy, November 2nd, eleven days after injury. The bladder at this moment contained 900 c.cm. of turbid, foul-smelling fluid. Irrigation with warm water was carried out until the medium was sufficiently clear to see the ureteral orifices, which were almost hidden by oedematous mucous membrane. There was a severe degree of cystitis, and many flecks of pus floated in the injected fluid.

An intramuscular injection of indigo-carmine was given, and blue jets were seen to issue nine and a half minutes later. There was no leakage in the intervals between the jets. Gradually increasing pressure was made by introducing fresh fluid through the cystoscope and the effects observed. The ureteral orifices were so indistinct that accurate observation of changes in their shape, due to increased intravesical pressure, was impossible. The jets, however, continued to be vigorous even when the bladder had been so distended that it could be felt to reach half way between the pubis and the umbilicus. The intravesical pressure thus produced supported a column of water 29 cm. in height. This was increased to 91 cm. by firm abdominal pressure, such as is recommended for evacuation of the bladder contents in these cases, with no visible result as regards the issue or the colour of the jets.

Though I have found that the presence of the ureteral catheter in the uretero-vesical orifice sometimes interferes with the valve-like action of the latter, I determined to try the effect in this case. Accordingly small catheters which did not tightly fit were inserted, and passed for about one and a half inches along the ureter. The jets were now transformed into a series of drops, three or four at a time, from the distal end of the catheter. No amount of abdominal pressure, within the limits of safety, was capable of forcing fluid up into the ureters and out through the catheters which drained them. Urine was collected from each side while pressure was being made, and was found, notwithstanding all the manipulations carried out, to be clear, though the bladder contents were turbid from the presence of minute floating particles of pus.

The integrity of the uretero-vesical valvular mechanism in this case was demonstrated by the following tests:

1. Increase of pressure did not cause any appreciable alteration in the character of the jets.

2. No accentuation of flow through the ureteral catheters occurred on pressure over the bladder through the abdominal wall.

3. The fluid issuing from the catheters throughout the observations remained of the same colour, and free from pus, which could not have been the case had it been diluted by admixture with the contents of the bladder.

It is also interesting to note that in this case apparently the kidneys were not yet affected. Indigo-carmine appeared in normal time, and the specimens from both sides had a specific gravity of just under 1015 and were free from pus and albumin.

There are three obstacles to the passage of fluid from the bladder to the ureter in a normal man. First, the peristalsis of the ureter, which is continually driving its contents towards the bladder; secondly, the tonicity of the uretero-vesical sphincter; and, thirdly, the valve formed by the oblique course of the lower end of the ureter through the coats of the bladder. The last-named arrangement is such that increased intravesical pressure, whether produced by urine or by fluid introduced through the urethra, actually tends to increase the efficiency of the valve, provided that the ureteral orifice is not paralysed or dilated. There is no evidence that in a normal subject the ureteral openings can be forced by distending the bladder from without. Having regard to the state of the ureters and their orifices as observed by cystoscopic examination in the cases mentioned, it would appear to be safe, from the point of view of forcing the uretero-vesical orifices, to attempt to empty the bladder by manual massage or pressure. It has been proved in animals that with moderate intravesical pressure, regurgitation of air, milk, and coloured fluids introduced into the bladder may take place from the latter into the pelvis of the kidney. It is quite possible that under certain circumstances a similar regurgitation takes place in man, but the observations here recorded would appear to show that it is not favoured by any abnormal relaxation of the uretero-vesical orifice special to spinal injuries.

REFERENCES.

[1] E. G. Fearnsides: *Brain*, vol. xl, Parts II and III, November, 1917. [2] *Manual of Military Urology*, published for the American Expeditionary Force, 1918. [3] T. R. Elliott: The Innervation of the Bladder and Urethra, *Journ. Phys.*, vol. xxxv, Nos. 5 and 6, July, 1907.

MANAGEMENT OF VENEREAL DISEASES IN EGYPT DURING THE WAR.

BY

SIR JAMES W. BARRETT, K.B.E., C.B., C.M.G., M.D., F.R.C.S.ENG.,

MELBOURNE, VICTORIA.

THE efforts made in Australia to deal with venereal diseases on a comprehensive scale date from the Dunedin Session of the Australasian Medical Congress (1896), and culminated in the comprehensive investigation made by the Government of Victoria in 1910 and 1911.

From 1911 to 1914 a good deal of educational work was done. Clinics were provided, but the Government did not move as fast as the Advisory Committee to the Ministry of Public Health (of which I was a member) thought necessary. Accordingly, a committee of medical men and women was formed, and drafted a circular, and arranged with the leading chemists that prophylactic outfits, each accompanied by one of these circulars, should be sold. Before, however, actually taking action, the circular was sent to every member of the medical profession and to every minister of religion in the State. They were asked to express approval or disapproval of the step proposed to be taken; if they disapproved they were asked to indicate a better method of controlling these diseases. All the medical men who replied expressed their approval. Of the 800 ministers of religion, about sixty replied; a strong minority replied in dignified language expressing approval, but at the same time regret that such a step should be necessary; a majority disapproved, whilst a few were simply abusive.

A deputation from the Council of Churches met the Medical Committee and a frank discussion ensued. The venerable president stated that he did not approve of the method proposed, but that he had no alternative to suggest. The committee asked him whether the churches felt any responsibility for the wholesale infection of the innocent which goes on at present and whether he could withhold assent from measures which would save them. Finally, the committee invited the Council of Churches to visit the asylums, the women's hospital, and the venereal clinic, examine the facts and meet again. At this juncture and

in the frame of mind indicated I left for Egypt on the outbreak of war.

On the way to Egypt, by direction, I gave systematic lectures to the 800 men on the ss. *Kyarra* on the natural history of these diseases and on the modes of prevention and treatment. The attitude adopted was that now familiar—namely, urging abstinence, but in its failure precautions against infection.

On arrival in Egypt in January, 1915, I found that the military authorities were much perturbed by the amount of venereal disease amongst the troops, and, after consultation, General Sir William Birdwood entrusted me with the organization of a moral and military campaign so far as the Australian troops were concerned. He informed me, however, that he was unable to authorize the use of prophylactics, and that any medical officer who adopted that policy must do so entirely on his own responsibility.

I visited all troops arriving from Australia. I handed to the officers a circular from General Birdwood, and the matter was fully discussed with them. Then each soldier was given a warning leaflet. Consequently every officer and every man arriving in Egypt was fully and adequately warned and a proper appeal made for his help.

In my own unit, however, the 1st Australian General Hospital, by permission of the officer commanding, the education begun on the voyage was continued. In addition, prophylactic outfits of calomel ointment and argyrol jelly, together with the Victorian circular, were made available for anyone who wanted them, with the intimation that whilst I should be better pleased if they were not required, still if exposure was contemplated, they should be used in the interests of the service. It may be that in other units similar measures were taken at that time, but of such action I have no first hand knowledge. At the same time, a number of other steps were taken—for example, limitation of the hours of sale of liquor.

The Result.

Before the troops left for the Dardanelles 800 to 1,000 men were known to be suffering from venereal disease at any one time (2.5 per cent. to 3 per cent. of the force). The average stay in hospital of a venereal case was sixteen days, so that the number of infections was large. In addition, 1,344 men were sent back to Australia, and 450 to Malta. The cost of sending a soldier to Egypt and back to Australia, together with his equipment and pay has been estimated at £300. If so, the cost of these cases to the State must have been somewhere about £500,000 without any commensurate return.

At this juncture a medical officer in conference challenged our estimate of the value of prophylaxis, and a test examination was immediately made of all the men in our own unit who had been supplied with outfits whenever they wanted them. Only one man had been infected, and he had not used the outfit. The number of men examined was under 200.

The number of infected was so large and the damage so great that renewed efforts were made, and the moral campaign was pushed harder than ever. By arrangement, the Y.M.C.A. opened the now celebrated Esbekieh Soldiers' Club, the Central at Alexandria, and many others. We recognized that men cannot be made moral against their will, but they can be given a reasonable and healthy alternative.* Furthermore, as time passed by the men were treated to personal exhortations, and were given printed documents, such as "Women: a Word to Men" (Y.M.C.A.); "Consequences" (Y.M.C.A.); "A Warning to Men Going Abroad" (The Association for Moral and Social Hygiene).

During the latter half of 1915 I ceased to be in charge of the work, and in November was invalided to England. I am inclined to think that for some time there was an interregnum in which no one pushed the work.

The result was that an intense moral and restrictive campaign, together with constructive work in the establishment of magnificent soldiers' clubs, staffed by ladies in some instances, had produced a moderate result. It had secured tolerable decency; there were no obvious orgies, but there was far too much venereal disease. On the other hand, where prophylaxis had been properly taught and applied, the diseases were practically non-existent.

At the end of 1915 the men returned from Gallipoli, and later moved to France, and during this period infections became more numerous.

From January to May, 1916—that is, five months—there were no fewer than 10,000 known cases in Egypt. The matter was regarded as so serious that a combined civilian and military committee was appointed to investigate and recommend. This committee—the Cairo Purification Committee—appointed subcommittees in other cities and took much evidence from medical officers and others. The conclusions have never been formally published, but in practice may be expressed as follows:

1. Rigorous repression of public indecency, unnatural offences, the suppression of pimps, the control of advertisements, and the restriction of the sale of alcohol.
2. Continuance of the system of medical examination of prostitutes.
3. Provision of ablution rooms and the supply of prophylactics.
4. Moral and hygienic lectures, guides to meet trains, and the like.

These measures were adopted, and by the middle of 1917 the diseases were again under control and the second phase of the Egyptian venereal diseases campaign was closed.

Again attention became less acute, the advance into Palestine took place, and another outbreak of venereal disease occurred. Another inquiry was held, this time by one combatant officer. After a full investigation, a combined campaign was again instituted and conducted with vigour. The chaplains did their best on the purely moral side. The medical officers delivered lectures and were allowed to provide ablution rooms. For a third time the disease was checked and held. The lesson to be learnt, however, is that it would have been better to place the matter throughout in the hands of one competent senior officer who should have made himself acquainted with every detail and every phase of the problem. His advice would have been indeed valuable.

Experience at Port Said.

Whilst these events were taking place throughout Egypt a remarkable development had occurred at Port Said. Lieut.-Colonel Elgood, C.M.G., was appointed Base Commandant of Port Said at the outbreak of war and has occupied that difficult and important post ever since. He states that before taking office he had no experience of the management of venereal disease and suddenly found himself in an uncharted sea of trouble.

He had to deal with a city of mixed nationalities, with multifarious consuls and with consular law, with a centre of the white slave traffic, and with very large numbers of troops and sailors of all nationalities—European and Eastern. Martial law was proclaimed in November, 1914. He did his best, and the activities are summarized as follows:

The suppression of the white slave traffic.
The closing of the brothels in the European quarter.
The segregation of the women who would not leave Port Said in the Arab quarter, where they were placed under the control of the medical officers of the Egyptian Public Health Department and were systematically examined. Experience having proved that the results of such medical examinations are misleading and dangerous, a subcommittee of the Cairo Purification Committee at Port Said was formed to deal with the local aspect of the problem and to assist in the development of healthy social agencies for the benefit of the men.
The punishment of pimps and touts.
The restriction of the sale of alcohol to the hours of 1 to 3 p.m. and 6 to 9 p.m. Enforcement of this order was difficult.

With all these activities he gradually realized that venereal disease continued on a large scale, and he then followed the conclusion of the Cairo Committee and authorized the ablution tent plan. The result was that of 9,282 men who passed through the local rest camp, 4,580 reported exposure, and there were only 13 infections.

Ablution Tent.

The measures adopted in the tent were:
1. Washing with a solution of perchloride of mercury 1 in 1,000.
2. Irrigation of the anterior urethra with a solution of potassium permanganate 1 in 3,000.
3. Application of calomel ointment and the use of bandages to avoid soiling the clothes.

* A full description of this splendid work on the part of the Y.M.C.A. will be found in the book published by Lieutenant Deane and myself entitled *The Australian Army Medical Corps in Egypt*, and in a forthcoming work of my own, *The Y.M.C.A. in Egypt*.

Such in outline is the history of this remarkable effort, the results of which agree with those obtained elsewhere in Egypt. When Lieut.-Colonel Elgood introduced prophylaxis he did not in any way relax any of the other precautions.

General Conclusions.

The lesson taught by the experience in Egypt is that all the repressive measures, all the constructive social measures, all the educational efforts and all the emotional appeals result in only a limited amount of success and only reduce venereal diseases to a moderate extent. It is evident that a very large number of men either find the sexual appetite overpowering or deliberately indulge, and unless some form of prophylaxis is adopted many infections are certain. Some of the men were quite candid and stated they intended to indulge, despite generals, doctors, and chaplains, and with or without prophylaxis, though they preferred to be safe.

The conclusions reached by me were that primary prophylaxis and ablution tents are both quite effective in preventing infection. The objections raised by some people to primary prophylaxis are both moral and medical. The moralists say that the free use of primary prophylaxis would induce people to become more immoral. I am unable to follow this line of reasoning. The use of prophylactics at the time of exposure, say 9.30 p.m., cannot produce a very different moral result from the use of prophylactics half an hour later in the ablution tent.

Medically the position, as I understand it, is as follows: The civil authorities in Great Britain contemplate establishing treatment centres throughout the country. These centres will subserve treatment, prophylaxis by ablution rooms, and educational propaganda. If all these measures are carried out nothing but good can result; but I still think many cases will arise owing to geographical difficulties, in which primary prophylaxis will be requisite. If these centres are to issue the outfits, so much the better; if not, it is certain some one else will provide them.

The aim of all medical men, I submit, is not simply the reduction of the amount of venereal disease, but the removal from this globe of the spirochaete and the gonococcus, a task which does not seem to me more difficult than the destruction of other noxious animals and plants.

Medical men dislike vice rather more than any class of people because they see it on the nauseous side. They are not, however, as medical men, professors of morality. Their business is to prevent or cure disease, and they have a right to object to their action being hampered by those who seem to think that venereal diseases were created to enforce chastity.

For the benefit of those interested I will state the case in the form of questions:

1. Is there any material difference from the moral point of view in preventing venereal disease by the use of measures adopted before, at the time of, or after exposure? He who exposes himself knows that in any event he is practically safe.

2. If morality is secured by fear of infection, why not forbid treatment altogether?

3. Is a morality which depends on fear of immediate consequences worth very much?

4. In practice does fear of infection deter many men?

5. If, as Mr. V. Warren Low put it, we discover to-morrow, as we may, a vaccine which will protect those vaccinated completely against venereal disease, will any one forbid its use, in the interests of morality?

6. Is not the fundamental ethical fact which concerns us the wholesale infection of the innocent which goes on at present?

7. Is it not a fact that the *lex talionis* cannot be enforced solely against the transgressor, but is enforced with terrible severity amongst the innocent?

8. Finally, why not frankly recognize the fact that the world will not be rendered more or less moral by the extinction of venereal disease?

To me the problem of chastity involves a much wider survey. We have a physiological instinct of great intensity round which has been built up the finer feelings which we value more than anything else in life. No sane man wishes to see the animal instinct divorced from these emotions, but he cannot fail to see that if the legitimate gratification in marriage is postponed to the summer of life irregular relationships are certain to be formed. If it be asked why men and women marry so late in life, the answer is the standard of external requirements set, and, as a valued friend observed, still more the artificial assessment of those values. The matter lies largely in the hands of women. If they revise their standards of value, most of the sexual difficulties will disappear.

But any revision requires a complete knowledge of the fundamental data, a clear and sane vision, and good judgement. Until social arrangements are recast, irregular sexual relationships are likely to continue, and whilst they do prophylactics are necessary for bodily salvation.

To me, much of the value of the knowledge gained in Egypt was contact with the facts of the case. We had to deal with an organized commercial system of vice provided with agents catering for the gratification of this powerful instinct by healthy men. We found that we could not succeed by social and moral means alone, and that prophylaxis was an absolute necessity if the men were to be kept healthy. Without recasting social relationships I see no present prospect of sweeping away the whole of this hideous paraphernalia.

PRELIMINARY REPORT ON THE PRESENCE OF A "FILTER PASSING" VIRUS IN CERTAIN DISEASES,

WITH ESPECIAL REFERENCE TO TRENCH FEVER, INFLUENZA, AND NEPHRITIS.

BY

MAJOR GENERAL SIR JOHN ROSE BRADFORD, A.M.S.,

CAPTAIN E. F. BASHFORD,* R.A.M.C.,

AND

CAPTAIN J. A. WILSON, R.A.M.C.

(A report presented to the Director-General Medical Services, British Armies in France.)

DURING the autumn of 1917, and the spring and summer of 1918, observations were carried out by us on the pathology of acute infective polyneuritis. These resulted in the detection, isolation, and culture by the Noguchi method of an organism that reproduced the malady when inoculated into animals; and, further, this organism was recovered by culture from such experimental animals. The details of this work will be published in the forthcoming number of the *Quarterly Journal of Medicine*, and therefore need not be considered here.

The causative organism of polyneuritis belongs to the group known as "filter passers," in that the virus will pass through certain filters, although it is not a filter passer in the sense that some other organisms are, as it does not pass through certain filters with very fine pores.

The satisfactory results obtained in the study of polyneuritis led naturally to the same method that had proved so successful with this disease being applied to other diseases where there was either evidence, or suspicion, that the causative agent was a filter passer. A considerable number of such diseases have been investigated on these lines during the last six months in the laboratories attached to certain hospitals in the Etaples area.

Captain J. A. Wilson conducted the whole of the bacteriological portion of these inquiries in the laboratory of No. 20 General Hospital. Further, the observations on trench fever mentioned below were all made in this hospital, and Major Frank Clayton, R.A.M.C., had charge of the clinical observations on the volunteers inoculated with the virus of trench fever.

Captain Peacock controlled the whole of the entomological part of the inquiry, and more especially the provision of clean lice to control observations on infected lice.

The experimental work on animals, and the histological work on the lesions so produced, has been carried out by Captain Bashford in the special laboratory attached to the Observation Hut at No. 26 General Hospital. The present report is merely a preliminary statement as to certain results achieved; the full details—clinical, experimental, and histological—will be published later.

Trench fever was one of the first diseases examined at the suggestion of Captain Wilson. Other observers have

* Captain Bashford took no part in the portion of this work dealing with trench fever.

adduced evidence showing that the virus of this disease belonged to the group of filter passers.

Trench Fever.

The virus isolated in trench fever consists of minute coccus-like bodies, grouped in pairs, with the opposing surfaces flattened, and varying in size from 0.3 μ to 0.5 μ. It is Gram-positive and stains readily if the film preparations are washed in ether before the stain is applied. It passes through Berkefeld N and V filters, and also through Massen porcelain filters, and can be cultivated from such filtrates. It resists heating to a temperature of 56° C. for thirty minutes, and it is an anaërobe.

This organism has been recovered by culture from the blood in 11 out of 15 cases of trench fever examined during the pyretic stage, and in 3 out of 8 cases examined when apyretic. It was not found in over 40 control cases where blood culture with the same technique was carried out. A similar organism was recovered from four separate supplies of infected louse excreta kindly supplied to us by Sir David Bruce.

It was not found in thirty-one specimens of excreta from batches of clean lice.

The culture obtained either from the blood of man, or from louse excreta, when inoculated by scarification into man, produces a mild illness, and the organism can be recovered from the blood by culture during such illness, and also from clean lice fed on the patient during the illness.

Influenza.

The virus isolated in cases of influenza consists of very minute rounded coccus-like bodies, varying from 0.15 μ to 0.5 μ. It is Gram-positive, and passes through Berkefeld N and V filters and Massen porcelain filters. It is an anaërobe, and resists heating to 56° C. for thirty minutes.

It has been isolated by culture from the blood in 6 out of 9 cases examined, from the sputum in 6 out of 6 examined, from pleural fluid in 4 out of 4 examined, and from the cerebro-spinal fluid in the only case so examined. It has also been isolated from the lymphatic glands *post mortem* in the only two cases examined. This organism can not only be grown from the blood, and from exudates, but it can also be seen in stained films prepared from exudates—for example, sputum, pleural fluid, cerebro-spinal fluid.

The culture (second generation), when inoculated into animals subdurally or intravenously, produces illness in guinea-pigs and monkeys, and on *post-mortem* examination the following lesions have been found: Extensive lobular pneumonia with haemorrhages, some nephritis, myocardial and hepatic lesions, such as extreme congestion, interstitial haemorrhages of small size, and fatty degeneration. Passage experiments done from such animals when slightly ill, by injecting their blood, bile, etc., into healthy animals, causes in these more severe and even fatal illness, and *post mortem* the same lesions are found. The organism has been recovered by culture from the tissues of such experimental animals.

Nephritis.

Up to the present time (January, 1919) only one variety of nephritis has been investigated—that is, that characterized by the presence of pyrexia and haematuria at the onset.

The virus isolated in such cases of nephritis consists of a round coccus-like body varying from 0.3 μ to 0.6 μ in size, and in culture often occurring in the form of short chains of four individuals. The same organism may be seen in urinary sediments either singly or in pairs. It is Gram-positive, and passes through Berkefeld N and V filters, and also through the Massen porcelain filter. It is an anaërobe, and resists heating to 56° C. for thirty minutes.

It has been isolated from the blood in 6 out of 9 cases examined, and from the urine in 7 cases. The culture (second generation), when inoculated into animals, produces nephritis in monkeys and guinea-pigs. In monkeys this can be determined not only by *post-mortem* examination, but also clinically, since the urine contains blood, albumin, and casts. In both guinea-pigs and monkeys extensive lesions, glomerular and tubular, are found on microscopic examination. In severe cases pulmonary lesions are also present.

The organism has been recovered by culture from the tissues of the animals experimentally inoculated.

These three diseases are those that have been most studied as yet, but organisms of the same group, although differing from one another, have been recovered by culture in a number of other diseases of obscure etiology. In most of these no adequate experimental work has been possible up to the present, and in others it is incomplete owing to insufficient time having elapsed to establish results with certainty. Amongst the more important diseases where true "filter passing" organisms have been isolated by culture from the blood, and seen in suitably stained films, mumps, measles, rose measles, and typhus may be mentioned. In mumps four cases have been examined, and all gave the same positive result. Two cases of typhus have been examined, but as yet it has only been possible to get material from one each of measles and rose measles.

An organism allied apparently to that of polyneuritis has been isolated from brain tissue in cases of encephalitis lethargica, both from material obtained from England, and also from cases observed in the army in France. A considerable amount of histological work has been done on the lesions present in animals (monkeys) successfully inoculated with these cultures. These results will be published later.

If the organisms found in polyneuritis and encephalitis are excluded, all the others have many points in common and possibly belong to one group. Although exceedingly small, they present individual differences in their morphology and in their mode of growth in culture. These details must be reserved for fuller and later publication.

Etaples, Jan. 21st, 1919.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

THE TREATMENT OF THE WAR PSYCHONEUROSES.

IN a memorandum under this heading (January 11th, 1919, p. 42) Captain Prideaux states that forgotten experiences are the rule in psychoneurotic patients, and infers that the symptoms are in all cases to be attributed to these latent experiences, their ultimate cure being brought about by their "revival" or reassociation with the general content of consciousness. In support of this contention he quotes three cases.

Case I illustrates the fact that it is possible under a mild degree of hypnosis to restore the memory of past experiences, a sufficiently interesting fact, but one which is well known and generally accepted, and hardly relevant to the points at issue.

Cases II and III, on the other hand, show the relation of a special symptom to a forgotten experience, and, so far as they go, would appear to confirm Captain Prideaux's theory.

It would be interesting to know from what, if any, additional symptoms Cases II and III suffered, and if these also were to be referred to a forgotten incident, either the one quoted or some other not identified. It is at least remarkable that other observers who have examined a large number of cases of a similar type have been equally successful in their results, and this without invoking the particular agency he favours, and indeed in many cases by working on apparently diametrically opposite lines. I am ready to believe that "forgotten experiences are the rule in psychoneurotic patients," but I am not sure that it is not equally true of normal individuals. I am prepared to believe, moreover, that individual symptoms in a given case are definitely related to a specific but forgotten incident, but when I am asked to accept this as the principle underlying all or even the majority of the psychoneuroses I must demur.

My purpose, however, is to plead for a more catholic acceptance of the various forms of psychotherapy, and especially for a consideration of the individual cases on their merits. One may have a prejudice in favour of hypnotic or waking-suggestion, the explanatory method of Dubois, psycho-analysis, or what you will. Experience has shown that each and all have their uses and their special application. For in the domain of the psychoneuroses, if anywhere, is it true that one man's meat is another man's poison. Moreover, the discarded system of yesterday leads by a natural evolution to the accepted theory of to-day, and, apart from its quota of "cures," is to that extent justified. But for Mesmer, Braid would never have written his famous treatise on *Neurypnology*, in which

he showed that the effects produced by so-called animal magnetism were entirely subjective; and but for the classical encounter between Charcot and the Nancy school we might still be regarding hypnotism as a disease of the nervous system. Even Freud availed himself of the hypnoidal state in his early investigations in psycho-analysis if only as a means to an end. Dejerine and Gauckler amongst recent writers have exemplified the truly philosophic attitude of mind towards these questions. By their lucid and convincing account of the share of the emotions in the genesis and fixation of obsessions and morbid mental states alone, they would have earned our gratitude.

If, therefore, the patient is highly suggestible and his mind is an open page waiting to be written upon, by all means persuade him "*for his good*"—there is nothing inherently indefensible in the process, even though the treatment is not directed, properly speaking, to his higher intelligence. Similarly, if a troublesome symptom is cured by hypnosis it must not be supposed that the whole personality has been altered, and it will not be surprising if the patient comes up six months later with a wholly different mental syndrome, which yields in turn to the same treatment. The explanatory method of Dubois, which was primarily addressed to the intelligence, fails in so many cases because man is largely a creature of the emotions, and Dubois's method failed to take sufficient account of the fact. It is none the less true that there are individuals in whom the rational appeal is the only successful one. Psychologists say that the emotions supply the dynamic energy of the mind, galvanize, as it were, the purely intellectual functions into activity, or more correctly, it is the affective element entering into every idea which gives it its purposive and creative value. This certainly appears to be borne out by experience. The psycho-analysts, on the other hand, attach equal weight to the emotions, but as pathogenic agents relegate them mostly to the plane of the subconscious. So that for them the springs of our actions or "connative tendencies" are hidden from us. They further inform us that we are not really such rational beings as we suppose, that, in vulgar parlance, we can always "find a reason" for our actions, but that the alleged reasons are frequently a sort of camouflage for our hidden desires. This they call the process of "rationalizing." I believe this to be partly true, but I do not think it takes sufficient account of the power of self-introspection which most people possess in some degree—perhaps to their detriment. What self-introspection does not reveal to us in moments of clear vision is generally elucidated by the disinterested efforts of friends and critics. This I believe to be quite the common experience. When the psycho-analyst further informs us that the act of forgetting is always purposive and significant—that, in short, we only forget the things we wish to forget—once again one's credulity is strained. Surely if there is such a thing as a normal process of memorizing or retaining an idea, presumably a failure of the memory function is as natural a phenomenon as, say, a digestive disturbance or a passing headache. Moreover, what becomes of the memory, as an instrument of the mind, if it is to be invested with an autonomy and purpose of its own?

So with all the various types of mental therapy, none of them can lay claim to an exclusive and special validity. For after all, it is the individual who counts and not the method; and if this be true of the patient it is at least equally true of the physician.

J. E. MIDDLEMISS,
Medical Officer to the Leeds Mental Deficiency Act Committee; late Lieutenant R.A.M.C.

GANGRENOUS CYSTITIS OF GONOCOCCAL ORIGIN.

WHILE serving in the Mediterranean about two years ago the following case came under my care for haematuria:

The patient, a skipper R.N.R., aged 27, stated that six months previously he had had an attack of acute gonorrhoea, and that the urethral discharge had never completely disappeared. He had treated himself from the commencement by urethral injections of potassium permanganate, and he had also taken the drug by the mouth. He admitted having caused himself considerable pain at times owing to the strength of the lotion used.

A fortnight before I saw him haematuria came on suddenly and without warning. The bleeding ceased in twenty-four hours. A fortnight later the haemorrhage had recommenced. He then complained of having to pass urine every half-hour by day and twelve times during the night. Pain in the suprapubic region followed the act of micturition. His general condition was poor; frequency of micturition prevented sleep. The pulse was 90, and the temperature subnormal.

Rectal examination revealed no evidence of disease of the prostate, but palpation of the base of the bladder elicited some tenderness. There was also tenderness on pressure in the hypogastric region immediately above the pubes. He was passing bright red blood. For four days after the commencement of this second attack of haematuria there was no change in the local condition. Attempts to stop the bleeding by frequent irrigation of the bladder with solutions of silver nitrate of varying strengths failed; and it was therefore impossible to determine the cause of the haemorrhage by cystoscopy.

On the fifth day I was called up early in the morning to find the patient in great distress with blood pouring out of the urethra. The pulse was 100 and thready. The temperature, previously subnormal, had risen to 101°. The patient was transferred to the operating theatre, and under general anaesthesia I performed suprapubic cystotomy. On incising the anterior wall of the bladder I found the whole mucous membrane swollen and in places sloughing. Arterial blood was escaping from beneath these sloughs. The pathological condition was similar to that observed in any virulent infection of a mucous membrane where secondary haemorrhage occurs. The bladder was irrigated with silver nitrate solution (1 in 5,000), packed tightly with gauze and a drainage tube inserted. During the following forty-eight hours the general condition showed a slight improvement, and the bleeding from the bladder temporarily ceased. On the third day the temperature rose to 103°. Cough commenced, and the breath was offensive. A severe haemorrhage from the bladder occurred on the fourth day, and when removing the gauze packing large sloughs came away. After thorough irrigation with a strong solution of silver nitrate the bladder was repacked and morphine ¼ gr. given hypodermically. From this time until death, five days later, the patient grew rapidly worse. His breath became very offensive, and there was consolidation of the bases of both lungs, but no expectoration. The temperature rose steadily to 104°. The respirations varied between 40 and 48, and the pulse between 100 and 120. Examination of the fluid from the bladder, a mixture of urine, blood and slough, made by Surgeon Lieut. Commander R. Willan, R.N., demonstrated the presence of the gonococcus.

Post-mortem Examination.

The whole of the mucous membrane of the bladder was one large slough and in places the muscular wall had become gangrenous. The lower lobes of both lungs were also gangrenous, and the stench was horrible. Unfortunately, through an error, investigation of the bacteriology of the diseased lungs was not made, but clearly the patient died of gonococcal septicaemia. All the other organs of the body were healthy.

Infection of the bladder is one of the rarer complications of gonorrhoea; a remarkable fact, since the posterior urethra and prostate are frequently involved in this disease; nor is it easy of explanation, when one remembers that the gonococcus finds its habitat in the submucous tissues of the urethra, which are continuous with those of the bladder. Whatever the explanation may be, experience has shown that when cystitis does occur there is a history of too drastic treatment of the local condition. In this case the patient, foolishly treating himself, had used too strong injections. In Thomson Walker's treatise on genito-urinary surgery the author refers in the chapter on cystitis to exfoliation of the mucous membrane of the bladder in very virulent infections, and states that the necrosed membrane may be passed as a cast of the bladder.

A. CLIFFORD MORSON, F.R.C.S.Eng.,
Temporary Surgeon Lieutenant R.N.

Reports of Societies.

MEDICAL ASPECTS OF AVIATION.

A LECTURE on medical aspects of aviation was delivered before the Royal Aeronautical Society on January 15th by Lieutenant L. E. STAMM, M.D., R.A.F., the chair being taken by Lieut.-General Sir ALFRED KEOGH.

In dealing with the conditions of the air involving strain on the physical functions of the body, the lecturer pointed out that these were chiefly height, centrifugal force, and equilibrium, and emphasized the fact that these stresses and strains not only demanded healthy organs, such as heart and lungs, but above all a sound controlling nerve mechanism. Various tests had been devised (for which credit was chiefly due to Lieut.-Colonel Flack) by which pilots could be examined on the ground for their capacity to withstand these strains, and they were specially directed to testing this controlling nerve mechanism as well as the organs themselves. Dr. Stamm's own work had been the

determination of the essential mental qualities of a good pilot and the means by which these might be detected. An experienced pilot controlled his machine automatically, but in the air circumstances constantly arose calling for conscious discrimination, judgement, decision, and action in the most rapid manner. For this not only quick and accurate co-ordination was required between senses and muscles, but also between these and the higher mental functions. To test this it was not sufficient to take the "simple reaction time" (the interval of time between a person receiving a signal and his response to it) as in the French air service, because the higher conscious mental functions were not involved. The lecturer demonstrated an apparatus, devised by him, by which a number of different signals could be given, requiring different responses, the candidate not knowing which to expect, and consequently necessitating conscious thought and decision.

Briefly, the apparatus consists of four signals, two lights, a horn, and a bell. When one of these signals is given by the operator, a chronoscope registering to $\frac{1}{100}$ sec., and electrically driven, also starts, and the response of the examinee consists in touching a key appropriate to the signal, which stops the chronoscope. The interval of time is then read off. The examinee is first given a series of each signal, then a series of two signals, the examinee not knowing which to expect, then a series of three-signal tests, and finally four-signal tests. Each series involving more conscious thought shows a longer reaction time, and the mental ability is tested by the rapidity and accuracy of response in proportion to the complexity of the test. The final four-signal test is the crucial one, and as it involves considerable adjustment and co-ordination between senses and muscles, and also calls for rapid and accurate working of the higher conscious mental functions, it offers a complexity of conditions similar to that involved in piloting an aeroplane.

These tests were applied to 150 cadets at the Northolt aerodrome, and an independent opinion was obtained from the instructors as to the capacity of the cadets as pilots; they were classified as "very good," "good," "average," or "poor." The results of these tests were thrown on the screen in tabulated form and showed that there was remarkable agreement with the opinions of the instructors. Those giving reaction times of about $\frac{40}{100}$ sec. for the four-signal tests were for the most part marked "very good" or "good," those with a reaction time of about $\frac{50}{100}$ sec. were usually "average," and those above $\frac{50}{100}$ sec. were "poor" or "turned down" or 'sent to heavier machines." In addition to a quick alert mentality, a good pilot must also possess emotional stability, so as not to be liable to mental paralysis by the emotion of fear. The lecturer considered that a rapid pulse caused by uneasiness at coming before a doctor for medical examination was a very fair indication of emotional instability or "windiness." Quick accurate judgement and emotional stability were the two chief mental qualities of a good pilot, and there should be a nice balance between them. The aviator required above all things a strong tough nervous system, able to withstand all stresses and strains, both mental and physical, in the air, to control well the vital organs, to react to external conditions quickly and accurately, and not affected detrimentally by emotional disturbance. In this connexion the lecturer suggested the term "nerve-physique." This type of nervous system was to be found most often in young men who had led an outdoor life and engaged habitually in sports.

Referring to the ill effects of alcohol and tobacco on pilots, it was pointed out that staleness from stress of long service led to greater indulgence in these poisons, and it was recommended that no one should be engaged in continual flying for more than three months without at least a fortnight's complete rest. The lecturer urged the same medical supervision for pilots in civil life as in the R.A.F. by medical men specially qualified for the purpose, and claimed that it was highly desirable that medical officers engaged in such work should have some personal experience of flying; he had found his own small flying experience of the greatest value.

A discussion followed, in which Colonel FLACK, Captain RIPPON, Captain THURSTON, and Sir MACKENZIE CHALMERS took part, and spoke appreciatively of Dr. Stamm's work.

LIVERPOOL MEDICAL INSTITUTION.—At a pathological meeting held in December, when Mr. THELWALL THOMAS, the president, was in the chair, Captain E. E. GLYNN narrated a case of acute yellow atrophy in a munition worker with a pseudo T.N.T. reaction in the urine. The patient, a girl aged 20, died comatose and jaundiced after a week's illness nine months after leaving the factory. The liver was soft and yellow and weighed 41 oz. There was intense necrosis with slight fibrosis and round-celled deposit; fat was in excess in places. By a process of exclusion the diagnosis was reduced to acute yellow atrophy and the urine reaction explained by a vegetable aperient (rhubarb). Captain S. M. CONE, U.S.A., read a paper on the growth and gross appearances of war-injured nerves, based on a study of over 500 cases. His conviction, from clinical, gross, microscopic and experimental observation, that nerves may grow from Schwann-sheath cells wherever injured, as well as from the central end of a divided nerve, was emphasized. Unusual and early recoveries occurred where the divided ends came together in a protoplasmic state. Wallerian degeneration always preceded the new nerve growth. A trophic connexion with the spinal centre was essential for the maturation of new fibres. The paper was illustrated by lantern-charts of normal nerves and of injured nerves in process of repair.

Reviews.

EARLY ARYAN SCIENCE.

THE ancient Hindus achieved, in both abstract and concrete science, a degree of excellence which has excited wonder and admiration, although modern knowledge has, both in methods and results, greatly transcended the early efforts of even the most civilized and progressive nations. In discussing Hindu achievements in exact science,[1] Professor BENOY KUMAR SARKAR avers that the main object of his little book "is to furnish some of the chronological links and logical affinities between the scientific investigations of the Hindus and those of the Greeks, Chinese, and Saracens." His disquisitions are avowedly somewhat sketchy, but he supplies an elaborate bibliography which will be found helpful towards a more detailed study of this interesting subject.

The particular sciences with which the book deals may be classified as abstract, physical, and medical. The sciences of number and form occupy six chapters; physical sciences also six, and medical science four. Curiously all reference to mental sciences—grammar, logic, metaphysics and psychology—is omitted. The author makes it quite clear that the Chinese on one side, and the Greeks and Arabians on the other, were mutually indebted for knowledge to the Hindus, but on which side the preponderance of obligation rested as regards either general or medical science it is difficult to say. It is not improbable that both Greeks and Hindus derived much of their science from a common prehistoric Aryan source. The Arabians probably drew from both Greeks and Hindus, and the Chinese no doubt interchanged with the Indians. The early medical researches of the Hindus were recorded in the *Ayurveda*, much of which survives in the writings of Charaka and Susruta of much later date. The acquirements, medical and surgical, chronicled by these authors were perpetuated, practically unchanged, by oral tradition, until the invasion of India by Western nations, especially by the British, introduced the doctrines and methods of rational and progressive medical science.

The Hindu mind is prone to abstraction, speculation, and mythology, and though much exact observation had been made in anatomy by the dissection of animals and men, good descriptions of diseases recorded, many mineral and vegetable drugs empirically discovered and employed, and rough surgical operations practised with rough appliances—still the three suppositious humours, *vayu*, *petta*, and *kofa* (wind, bile, and phlegm), dominated both physiology, pathology, and therapeutics, just as astrology governed and debased astronomy, and alchemy chemistry.

The work is clearly arranged and pleasantly written, and will be found both interesting and instructive.

---

[1] *Hindu Achievements in Exact Science.* A study in the history of scientific development. By Benoy Kumar Sarkar, Professor National Council of Education, Bengal. London and New York: Longmans, Green, and Co. 1918. Pp. 82. (Cr. 8vo. 1 dol. net.)

RE-EDUCATION OF THE MAIMED.

THE physical and occupational re-education of the maimed soldier is a subject of such world-wide importance that we cannot have too much discussion of it, and our thanks are therefore due to Surgeon W. F. CASTLE, R.N., for his translation, under the title *Physical and Occupational Re-education of the Maimed*,[2] of the book by JEAN CAMUS and his collaborators. While it does not make a large volume it includes essays by a score of contributors.

Although among the maimed are included men who have not lost a limb, yet the majority of cases here dealt with are those of amputation. The problem in France is somewhat different from that in Great Britain, for while here the vast majority of wounded are town workers, in France over 60 per cent. were employed upon the land in civil life. This simplifies the problem as regards the upper extremity, since it has been shown that among men who have suffered amputation he who has lost an arm is best fitted for agricultural pursuits, while the man who has lost a leg is perhaps better suited to town life, though even this is doubtful. A little reflection will make these statements comprehensible, but the fact that French experience shows that blind men are best employed in country pursuits is somewhat startling. At the time when the French original of this book was written—probably at least a year ago—there were 4,000 men in the French army who had lost the sight of both eyes, and it is estimated that three-fourths of this number might have been saved by the use of shell-splinter goggles.

In reviewing so condensed a work as this, which is packed with details, it is not possible to deal with most of the points raised, but an impression is left upon the reader of the enormous value of re-education. It seems clear that a universal artificial arm is an unattainable ideal. In fact, except for special tasks involving frequent repetition of similar movements or sequences of movement, anything more elaborate than the old hook is not likely to be used. The fact is, and it cannot be too much insisted upon, that no man will use an artificial hand for any purpose for which his sound hand can be employed.

Cases of amputation of both upper extremities form a class apart; only rarely can they be rendered self-supporting. Although re-education has not been so thoroughly or so generally carried out in this country as in France, the appendix by Mr. Dudley Myers on the re-education work at Roehampton and the institutions working with it will show what good work has been accomplished. Attention should be called also to the appendices giving an account of the Lord Roberts workshops, and to the description by Sir Arthur Pearson of the great work among the blinded at St. Dunstan's and elsewhere. To those unfamiliar with the results achieved at St. Dunstan's by re-education, it will seem incredible that a blind man who has lost an arm should be capable of becoming a skilled mechanic or even a competent poultry farmer, yet such is undoubtedly the case.

This book should be in the hands of every one who has to do with the maimed, and a copy should be at the disposal of every War Pensions Committee.

NOTES ON BOOKS.

PROFESSOR RUDDIMAN'S *Pharmacy, Theoretical and Practical*,[3] is a book for the student of pharmacy, to be used in conjunction with the United States Pharmacopoeia and National Formulary. It is well arranged and clearly written; the author should, however, distinguish between virility (page 83) and virulence.

The fourth edition of MOOR and PARTRIDGE'S *Aids to the Analysis of Food and Drugs*[4] is a valuable little book, full of information, and as well up to date as it is possible to be in these days of changing standards and orders. It should be in the hands of all students of public health.

Dr. CROCKER'S translation of the book on *Mastitis of the Cow*,[5] by Dr. SVEN WALL of Stockholm, provides the reader with an interesting essay on a subject of great importance from the point of view of public health. The book is briefly but clearly written in summary style, and contains a great deal of practical advice as well as of scientific description. It should be in the hands of all who have to inspect dairies or slaughterhouses, or meat intended for human consumption. The translation has been adequately performed.

Professors MORAT and DOYON of Lyon are to be congratulated on the appearance of the fifth and last volume of their monumental *Traité de Physiologie*.[6] This contains an account of the organs of special sense, locomotion, and reproduction, and is written with the thoroughness and clarity which have characterized its predecessors. The whole treatise forms a book of reference in which the literature of the subject is submitted to a critical analysis; the reader has the evidence placed before him, and is left to draw his own conclusions from it but little biassed by the authors.

[2] *Physical and Occupational Re-education of the Maimed.* By Jean Camus. Authorized translation by W. F. Castle, Surgeon R.N. London: Baillière, Tindall, and Cox. 1918. (Cr. 8vo, pp. xii + 195; 64 figures. 5s. net.)

[3] *Pharmacy, Theoretical and Practical.* Including Arithmetic of Pharmacy. By Edsel A. Ruddiman, Pharm.M., M.D., Professor of Pharmacy and Materia Medica, Department of Pharmacy, Vanderbilt University. New York: John Wiley and Sons, Inc. London: Chapman and Hall. 1917. (Demy 8vo, pp. vi + 267. 8s. 6d. net.)

[4] *Aids to the Analysis of Food and Drugs.* By C. E. Moor, M.A. Cantab., F.I.C., and William Partridge, F.I.C. Fourth edition. London: Baillière, Tindall, and Cox. 1918. (Fcap. 8vo, pp. xii + 268. 4s. 6d. net.)

[5] *Mastitis of the Cow.* By Sven Wall, Assistant in the Veterinary High School at Stockholm. Authorized translation, with annotations, by Dr. Walter J. Crocker, B.S., V.M.D., Professor of Veterinary Pathology, University of Pennsylvania. Philadelphia and London: J. B. Lippincott Company. 1918. (Med. 8vo, pp. x + 166; 29 figures. 12s. 6d. net.)

[6] *Traité de Physiologie.* Par J.-P. Morat, Professeur à l'Université de Lyon, et Maurice Doyon, Professeur adjoint à la Faculté de Médecine de Lyon. Paris: Masson et Cie. 1918. (Roy. 8vo, pp. xxx + 872; 221 figures. Fr. 25.)

THE MILITARY MEDICAL SERVICES IN 1918.

THE following notes constitute the fifth annual review of the military medical services in the war, with tables of casualties and honours. Previous articles were published in the BRITISH MEDICAL JOURNAL of January 2nd, 1915, January 15th, 1916, January 27th, 1917, and February 9th, 1918.

As the official *Army Lists* are not yet available for consultation it is not possible to give the numerical strength of the various services. Nor can the percentages of casualties and honours to strength in the various services be calculated.

The mortality among medical officers during just four and a quarter years of war is briefly shown in Table I. Medical officers of all services, and also medical men serving as combatants, are included in this table. In both this and the following table officers who died of wounds, or who were lost at sea by enemy action, are included among the killed.

In all the tables the figures are probably not exactly accurate, but they are approximately so, within a few units. While deaths in action ceased from the date of the armistice—November 11th—deaths from wounds and from disease are included up to the end of the year.

TABLE I.—*Deaths*

Year.	Killed.	Died.	Total.
1914 (five months)	46	9	55
1915	97	45	142
1916	162	98	260
1917	200	93	293
1918	173	163	336
Total	678	408	1,086

The number of medical officers killed in 1918 is somewhat (13 per cent.) less than in 1917; this may be attributed to the cessation of hostilities nearly two months before the end of the year. The total of deaths from disease, on the contrary, is much higher than in any of the previous years—more than 50 per cent. above the totals for 1916 and 1917—and, for the first time, almost equals the number of killed. This increased mortality is due to the influenza pandemic, nearly half the total number of deaths from disease having taken place in the last quarter of the year.

In Table No. II are shown the numbers killed (including died of wounds and lost at sea), died while serving, wounded, missing, and prisoners, in each of the medical

services, during 1918. The figures of wounded, missing, and prisoners have been compiled from the daily casualty lists, as summarized weekly in the BRITISH MEDICAL JOURNAL, and may be considered approximately correct, except for a certain amount of overlapping—small compared to the total figures—due to men who died of wounds having previously been included as wounded, and most of those missing having subsequently been reckoned over again, either as killed or as prisoners.

In the absence of information as to the numerical strength of the different services it is impossible to reckon the percentages of casualties. In actual numbers the temporary officers of the R.A.M.C. head the list, the number of killed among these officers being more than four times, and the number of deaths from disease well over double, those of any other group. But the total number of these officers is far greater than that of any other class.

In the review of the year 1917 it was noted that the proportion of deaths to strength was probably higher in the Australian A.M.C. than in any other medical service. In 1918 it has been the Canadians who probably furnish the highest proportionate mortality, partly owing to the fact that six Canadian medical officers (as well as fourteen Canadian nurses) were lost in the *Llandovery Castle*.

The seat of war in which casualties have occurred has not been given in the official casualty lists, and seldom given in private obituary notices. It is certain, however, that by far the greatest number have taken place in France and Flanders, though other fronts—Italy, the Balkans, Palestine, Mesopotamia, and East Africa—have all contributed their share. Many of the deaths from disease have, of course, occurred in England.

Retired officers of the R.A.M.C. and I.M.S. who have died while serving are included among the regular members of these services.

TABLE II.—*Casualties and Honours, 1918.*

	Killed.	Died.	Wounded.	Missing.	Prisoners.	Honours.
R.N.	14	18	13	2	2	48
R.A.M.C.	13	13	21	6	7	219
R.A.M.C.(S.R.)	10	11	54	5	6	123
R.A.M.C.(T.F.)	16	20	46	14	13	227
R.A.M.C. (temporary)	86	54	258	78	99	526
Australians	7	2	43	—	—	102
New Zealanders ...	3	1	1	—	—	22
Canadians	20	12	58	—	—	99
South Africans	1	4	1	—	—	41
E. and W. Africa ...	—	5	—	—	—	16
I.M.S.	2	15	5	—	1	69
I.M.D.	—	3	—	—	—	26
Combatants	1	1	—	—	—	—
Miscellaneous	—	4	—	—	—	—
Total	173	163	500	105	128	1518

ROYAL NAVY MEDICAL SERVICE.

The strength of the medical department of the Royal Navy is probably much the same as in the previous year. The number of medical officers killed during the year was fourteen, of whom eight were temporary surgeons and six surgeon probationers, or surgeon sublieutenants, as they are now called. Eighteen have died, of whom four were surgeon sublieutenants.

During the year new designations were given to the medical officers of the navy—compound titles, from Surgeon Vice Admiral to Surgeon Sublieutenant, being introduced, in place of those of the former ranks, Surgeon General to Surgeon Probationer.

ROYAL ARMY MEDICAL CORPS.

As stated above, little can be said about the strength of the different branches of the R.A.M.C. The number of new appointments to the regular R.A.M.C. probably fully covers the loss by deaths in action and from disease, and by retirements. The number of Territorial medical officers probably remained much the same, while it seems likely that the number of temporary officers and of the Special Reserve somewhat increased, for demobilization had hardly begun before the end of the year.

The number of officers of the regular R.A.M.C. killed (including two lost at sea, one of whom was on the retired list), was the same as in 1917, thirteen; while the number of deaths from disease rose from five to thirteen. Of the Special Reserve, ten were killed, including one lost at sea, and eleven died, as compared with thirteen and two in 1917. Of Territorials, sixteen were killed, including one lost at sea, and twenty died, the corresponding figures for 1917 being twenty and nine. Of temporary medical officers eighty-six were killed, including eight lost at sea, and fifty-four died, as against ninety-two and thirty-six last year.

Among the medical corps of the Dominion forces losses fell most heavily on the Australians in 1917, on the Canadians in 1918. In 1917 the Australians lost eighteen killed and five died, in 1918 only seven killed and two died. The Canadians, on the other hand, lost twenty killed and twelve died, as compared with only four and seven in 1917. The twenty killed include six lost at sea, all in the *Llandovery Castle*. Of the New Zealanders, three were killed and one died; the South Africans lost one killed and four died.

Wounded, Missing, and Prisoners.—The figures for the different services are given in Table II. The total of wounded is much below that of 1917, while the numbers of missing and prisoners are much higher.

Titles.—In the *London Gazette* of February 27th, 1918, the titles of Lieutenant-General and Major-General were granted to the Surgeon-Generals of the Army Medical Staff, just twenty years after the grant of the other military titles in 1898. Subsequently, the grant of these titles was extended to the retired Surgeon-Generals who were serving during the war.

Combatants.—One medical man serving as a combatant, a major in the artillery, was killed, and one, Brigadier-General A. A. Howell, died.

Dental Surgeons.—Two dental surgeons were killed serving as combatants. Three dental surgeons in the British, and two in the Canadian service died. These officers are not included in the table.

Sons of Medical Men.—The number of sons of medical men whose deaths have been reported in the BRITISH MEDICAL JOURNAL was 385 in 1916, 338 in 1917, and 318 in 1918. The great majority of these were killed in action, but a few have been included who died of disease, chiefly of influenza in the last quarter of the year. A good many of the medical officers killed and died were also sons of medical men, though not counted under this heading. The figures are doubtless very imperfect, especially as regards men serving in the ranks and in the Overseas Forces.

Medical Students.—The number reported killed in 1916 was 57, in 1917 it fell to 35, and in 1918 was only 16. Many of the sons of medical men who were killed or died had been medical students before joining the army, but are not counted a second time under this heading. Here again the figures are no doubt very incomplete.

THE INDIAN MEDICAL SERVICE.

The strength of this service probably remains much the same as a year ago, the number of new appointments by nomination probably about balancing the losses by death and retirement. A considerable number of temporary officers have been appointed during the year, but, on the other hand, many of the earlier temporary officers have gone out for various reasons. On the whole, the number of temporary officers has probably somewhat increased.

No officer of the I.M.S. has been reported as killed during 1918. Two—one a retired and the other a temporary officer—were lost at sea. Fifteen died serving, of whom two were temporary and three retired officers.

As in the British army, the Surgeon-Generals of the I.M.S. were granted the title of Major-General during the year.

The Indian Medical Department.

From October 2nd, 1918, the objectionable epithet of "subordinate" was dropped out of the title of this service.

and the I.S.M.D. became the I.M.D. For a long time past the epithet "subordinate" has been quite misplaced as regards the members of the assistant surgeon class, military and civil, though appropriate enough to the lower grades.

The names of members of this service do not usually appear in the casualty lists, but the deaths on service of three military assistant surgeons—one senior and two of junior grades—have been reported. The actual mortality must have been much higher. The service gained twenty-six honours, including two Military Crosses.

THE AFRICAN MEDICAL SERVICES.

Under this head are included the West African Medical Staff and the medical services of British East Africa, Uganda, British Central Africa, Nyasaland, and Rhodesia; but not, of course, the forces of the Union of South Africa. Many of the younger members of these services are holding temporary commissions in the R.A.M.C., and their statistics are included among those of the temporary officers. The deaths of five officers of these services, of whom only one held a temporary commission, have been reported.

MISCELLANEOUS.

The four deaths shown under this head were those of the surgeons of an Admiralty transport, a cable ship, a mercantile steamer, and a Chinese coolie corps.

THE NURSING SERVICES.

These services have suffered far more heavily in 1918 than in any previous year of the war. Nine members were reported killed, no fewer than thirty-nine were lost at sea, and seventeen were returned as wounded. Six Canadian nurses were killed or died of wounds in the bombing of the Canadian hospitals at Etaples by enemy aircraft on May 25th, and six more were wounded on that occasion. The remaining casualties, other than those at sea, were presumably also caused by enemy aircraft. The number who have died of disease has also been very large. The nursing profession, both civil and military, suffered very severely from the influenza epidemic in the last quarter of 1918, probably more severely than any other class of the community, the very high fatality among nurses being presumably due to infection at a period of excessive work.

Of the thirty-nine lost at sea, ten were lost in the *Aragon* in the Mediterranean on December 31st, 1917 (five of these, however, were included in the casualties for 1917); eight in the *Glenart Castle* in the Bristol Channel on February 26th; two in the *Kenilworth Castle* on June 4th; fourteen, all Canadians, in the *Llandovery Castle* in the Atlantic on June 27th; and three in the *Leinster* in the Irish Sea on October 10th; while two were drowned at Basra in January.

HONOURS.

The honours bestowed on members of the medical services are shown in Table III. The figures include the honours gazetted on January 1st, 1918, but not those of January 1st, 1919. The figures in the table are doubtless not absolutely accurate, considering the very large number tabulated, but they are approximately so.

The total number of honours is considerably higher than in 1917. The increase is shared by most of the services, except the regular R.A.M.C. and I.M.S., which are slightly less, and the New Zealanders, which are exactly the same. The chief increases fall to the Special Reserve, the Territorials, the temporary officers, and the Canadians. The number of honours bestowed on the medical department of the Royal Navy is, as usual, only small.

Honours conferred on retired officers of the R.A.M.C. and I.M.S. are included with those on the active list. The column headed "miscellaneous" comprises a number of honours of each of which only a few have gone to medical officers: Knighthood (including that of St. John), the Royal Victorian Order, the Indian Empire, the Territorial Decoration, the Royal Humane Society's and Albert medals; also, in the I.M.D., the Order of British India, Indian Order of Merit, and Indian D.C.M. The foreign orders include French, Belgian, Italian, Serbian, Greek, Portuguese, Japanese, and Egyptian decorations, no Russian orders being now granted.

TABLE III.—*Honours, 1918.*

	V.C.	K.C.B.	C.B.	K.C.M.G.	C.M.G.	D.S.C.	Bar to D.S.O.	D.S.O.	Bar to M.C.	Military Cross.	British Empire.	Miscell.	Foreign.	Total.
R.N.	—	3	6	—	6	6[1]	1	6	1	—	4	4	11	48
R.A.M.C.	—	4	18	9	31	—	8	62	1	15	7	9	55	219
R.A.M.C.(S.R.) ...	—	—	—	—	—	—	2	7	16[4]	84	2	—	12	123
R.A.M.C.(T.F.) ...	1	—	3	—	11	—	2	54	18[5]	76	7	20	35	227
R.A.M.C.(temp.)	—	—	11	5[2]	12	—	7	34	62[3]	324	13	—	58	536
Australians	—	—	1	—	9	—	1	33	3	41	7	—	7	102
New Zealanders	—	—	1	—	3	—	—	4	—	8	5	—	1	22
Canadians ...	1	—	2	—	9	—	1	21	3	44	7	—	11	99
South Africans ...	—	—	—	1	1	—	—	9	—	16	12	—	3	41
E. and W. Africa	—	—	—	—	—	—	—	3	—	7	5	—	1	16
I.M.S.	—	—	3	1	4	—	—	14	—	13	12	19	3	69
I.M.D.	—	—	—	—	—	—	—	—	—	2	4	18	2	26
Total	2	7	45	15	86	6	22	247	104	630	85	70	199	1518

[1] Includes one bar. [2] One a G.C.M.G. [3] Includes six second bars to M.C. [4] Includes two second bars. [5] Includes one second bar.

The most coveted honour of all, the Victoria Cross, was conferred on only two medical officers during the year—Captain J. Fox Russell, T.F. (posthumously), on January 11th, and Captain B. S. Hutcheson, Canadian A.M.C., on December 14th. Ten V.C.s and two clasps have been gained by medical officers during the war; no other clasps, except these two, have ever been given. Out of the total of twelve, four Crosses and one clasp have been won by Territorials, two Crosses and one clasp by temporary officers, two Crosses by Canadians, and one each by the regular R.A.M.C. and the I.M.S.

In addition to the honours shown in the table, one medical officer from Newfoundland received the C.M.G., one from Barbados the O.B.E., and two Egyptian medical officers the M.B.E.

INTERNATIONAL COUNCIL OF SCIENTIFIC RESEARCH.

Meeting in London.

AT the instance of the Royal Society a meeting of scientific societies was held in London last October to consider what should be done in respect of the international relations of science after the war. It was felt that, though wars have in the past interrupted the co-operation of individual men of science without destroying their mutual esteem, the conduct of the Central Empires in this war had rendered it impossible to renew personal relations with their men of science. Confidence, without which fruitful co-operation is impossible, could not be restored until the Central Empires have disavowed the political methods which led to the perpetration of atrocities that have aroused the indignation of the civilized world. It was proposed, therefore, that the international agreements for certain associations should be denounced, and replaced by others established by the allied nations, to which neutrals might in time be admitted. The conference appointed a commission to draw up plans for international scientific organizations. It proposed the establishment of national councils, to be federated into an international council. It adopted a resolution to the effect that the conference, holding all progress, whether industrial, agricultural, or medical, to depend upon the discoveries of pure science, called the attention of governments to the importance of theoretical researches conducted without regard to immediate results, to the necessity for making the grants for these purposes as large as possible, and to the importance of establishing large private and national laboratories of experimental science.

Meeting in Paris.

The conference separated with the intention of meeting again at an early date in Paris. This intention was carried

out, and this second conference was attended by delegates from the principal scientific societies of Belgium, Brazil, the United States of America, France, the United Kingdom, Italy, Japan, Poland, Portugal, Rumania, and Serbia. The members represented all departments of science, and included Dr. S. Flexner (America) for the United States; Dr. Roux, director of the Pasteur Institute in Paris, for France; and Sir E. Sharpey Schafer, professor of physiology in the University of Edinburgh, for the United Kingdom. The conference resolved itself into an international council and appointed an executive committee of five members to report upon certain scientific and technical questions. One of the first businesses of the executive committee will be to form new associations of men of science of inter-allied and neutral nations. As soon as this can be done a further conference will be held to establish an International Research Council. The committee will consist of Mr. G. Hale, director of the Mount Wilson Observatory, California; M. G. Lecointe, director of the Royal Belgium Observatory; M. Emile Picard, secretary of the French Academy of Sciences; Professor A. Schuster, one of the secretaries of the Royal Society of London; and M. Volterra, professor of mathematical physics in the University of Rome. The executive committee is to have its business office in London. M. Picard was elected its chairman and Mr. Schuster its secretary. The immediate work of the executive committee will be to establish international associations for astronomy and geophysics, sciences in which international co-operation is essential if they are to be carried on at all.

Declaration of Principle.

The conference adopted a number of resolutions of which we have given the general effect, but it also adopted a declaration of principle, which may be rendered into English as follows:

"The conference, recognizing that in matters of science the first advances are always the result of individual effort, considers it to be one of its fundamental tasks to encourage every effort having for its object the provision of the necessary material resources to assure to capable men of science the intellectual liberty essential to the success of scientific researches of a high order."

THE CENTRAL MEDICAL WAR COMMITTEE AND MEDICAL DEMOBILIZATION.

IT is thought that a brief statement should be made as to the status and functions of the Central Medical War Committee with regard to the demobilization of medical officers now serving with the forces. In the JOURNAL of January 4th last (p. 16) a sketch was given of the history of the professional committees which undertook to organize medical effort in the war, and of the large share taken by the British Medical Association in their establishment, both in England and in Scotland. The Central Medical War Committee was formally appointed in 1915, on the instruction of the Annual Representative Meeting, to organize the medical profession in England and Wales and Ireland in such a way as would enable the Government to make the best use of every practitioner fit to serve the country, and to deal with all matters affecting the profession arising in connexion with the war. The Committee's scheme of enrolment, whereby many medical men were obtained for the army, was officially recognized by the Army Council both before and after the enactment of the first Military Service Act, 1916. The second Military Service Act, 1916, directed the establishment of professional committees to deal with claims for exemption made in respect of duly qualified medical practitioners, the decision of such committees being binding on tribunals. The third Military Service Act, April, 1918, provided for the appointment of the professional committees as statutory medical tribunals for the hearing of applications for exemption from military service by medical men; and the Central Medical War Committee was made the medical tribunal for England and Wales.

Thus, up to the time of the armistice, the Central Medical War Committee was exercising statutory powers under the Military Service Acts in the selection of medical men for service in the forces. In this process the Committee had in effect to adjudicate between the demands of the military authorities, the needs of the civilian population, and the personal claims of the medical men concerned, until the time when this work was undertaken by the Ministry of National Service. In considering civil needs the Committee worked in close collaboration with various Government departments, such as the Insurance Commissions and the Local Government Board. Each of these departments held the power to say that any medical man for whom it was responsible should not be withdrawn from civilian practice, though in point of fact this veto was seldom, if ever, exercised owing to the closeness of the co-operation which existed. As time went on the Ministry of National Service gradually had a larger say in the process of distributing medical men to the various forces, and undertook a corresponding responsibility for safeguarding the medical needs of the civil community.

When the armistice was signed the statutory duties of the Central Medical War Committee as a medical tribunal came to a stop, for with the cessation of recruiting its legal powers automatically fell into abeyance, as did those of all the other tribunals. The Ministry of National Service was nominated as the Government Department through which the demobilization of civilian doctors serving as medical officers in the Navy, the Army, and the Air Force would be arranged (SUPPLEMENT, December 28th, 1918), and exercises its functions through an Interdepartmental Committee on Medical Services. This contains representatives of all the Government bodies concerned in the employment of medical men, under the chairmanship of Sir James Galloway, Chief Medical Commissioner of the Ministry of National Service. Two representatives of the Central Medical War Committee attend by invitation the meetings of this Interdepartmental Committee when their advice is required.

Many months earlier the Central Medical War Committee had, in the interests of medical officers, entered upon the study of the various problems which were bound to arise in connexion with medical demobilization, and a scheme of priority of release on personal and professional grounds had been drawn up. In view of its long experience in obtaining medical men for the army with due regard to civilian needs, the Committee felt that it ought to offer its help in the reverse process, and this offer was accepted by the Government departments concerned. The Committee has thus been enabled to take a considerable share in organizing the return of medical officers to civilian life upon an orderly and equitable basis. It is important to note, however, that its functions in this respect are advisory and consultative.

The scheme of priority, which was mainly the work of the Committee, has been adopted by the Ministry of National Service for the purpose of general medical demobilization (SUPPLEMENT, January 11th, 1919). The scheme is already being used in deciding the order in which the limited number of releases at present possible are to take place, questions of the civil needs of particular areas being dealt with concurrently by a separate procedure. In the meantime, the form of questions (which is the necessary sequel of the scheme) is being issued by the Ministry of National Service to all serving medical officers, and the information received will be placed at the disposal of the professional committees, whose advice and assistance will be used to the full in assessing the claims of individual medical officers. The final word, however, rests with the Minister of National Service, to whom the Government departments which formerly possessed the power of veto in the recruiting of a medical man have the right to make direct representations as to the demobilization of doctors coming within their purview. As in the past, the Central Medical War Committee will continue its active co-operation with the Government departments concerned—more particularly with the Insurance Commissioners—and will have an opportunity of knowing and commenting on the selection of names by them; all of which it is hoped will be helpful in making the wisest choice. But the Committee, while undertaking to do the best that lies in its power, cannot be held responsible to the same extent as was the case when it performed statutory duties as a medical tribunal.

British Medical Journal.

SATURDAY, FEBRUARY 1ST, 1919.

HOSPITAL RESIDENTS.

IT was in the nature of things that during the war civil hospital authorities should find their chief difficulty in the lack of a supply of younger men for resident appointments. In the larger hospitals with medical schools the difficulty was partly met by the seconding of newly qualified men for a period of three months prior to joining the forces. The smaller hospitals without medical schools have endeavoured to meet the shortage in various ways. Services have been cut down to a minimum; the unfit in a military sense, women, and non-Europeans have been used when available; while the senior staff have often filled the gap, even to the extent in some cases of acting in turn as orderly officer. But the task has been very onerous, and it has been inevitable that the attendance on the civil population in hospitals should suffer. Since the signing of the armistice, and with the progress of limited demobilization, it has been felt that some amelioration of these conditions could be effected.

The professional committees, upon whom has depended so largely the adjustment of civil resources to military demands during the war, are now faced with the task of balancing the immediate needs of the community, the future efficiency of the medical profession, and the personal claims of the medical officers. When demobilization came under discussion the Central Medical War Committee, in common with the public at large, very early adopted the view that, other things being equal, priority of release ought to be given to those who had served longest and were oldest. At about the same time the epidemic of influenza showed how narrow was the margin of safety in medical attendance on the civil population. Hence it became necessary to recognize that before the priority scheme of the Committee could be put into force some measure of consideration must be given to urgent civil needs. This was felt so strongly by one Government department, responsible for the medical care of a section of the populace, that for a time there seemed to be some risk of attention being distracted from the good of the community as a whole.

The hospital resident is of value to the community not merely from the fact that he attends to the immediate medical requirements of a large number of people. In carrying out his functions he is increasing his own efficiency, and therefore the value of his services to the community in the future, in a way which is almost impossible under any other conditions. At a time, therefore, when the demand for well instructed medical men is clamant, it is essential that means should be concerted to ensure that this stage of medical education is not unnecessarily curtailed. On the other hand, it must be recognized that peace is not yet signed; that the army, of 900,000 men, must still be kept supplied with young medical officers; that no hospital can expect to return as yet to pre-war conditions in respect of resident officers; and that any process of releasing younger men for the advantage, immediate or prospective, of the community should not work to the disadvantage of the older men on service. This brings us at once to some of the real difficulties of the situation. In the first place, the interests of the older medical officer, especially if he has served since the beginning of the war and wishes to return speedily to the remains of his practice, are incompatible with the release of any large number of younger men. It stands to reason that every young man now withdrawn from the army must postpone to some extent the release of an older man. The army as it exists to-day requires a certain number of medical officers; if a young man is detailed for service in a civilian capacity an older man will be kept in order to maintain the military standard. From this dilemma it is hard to escape. Yet all will agree that whatever is possible must be done for the younger men who, owing to their service in the navy and army, have not had the opportunity of rounding off their clinical and scientific training by the experience which a resident hospital appointment affords. In a paragraph last week on post-graduate medical study with the army in the field we expressed the hope that the military authorities would do their utmost to foster the professional education of medical officers awaiting demobilization. But no makeshift courses of instruction under active service conditions could replace the experience to be gained in a house appointment at home.

It is clear, therefore, that apart from the demands of the hospitals for the proper treatment of the sick, and apart from the public need for well-instructed doctors, the position of the young doctor as regards his own future has to be considered. There are first the men who volunteered in the early days of the war, immediately after qualifying and without allowing themselves time to take hospital posts; there are next those who have qualified during the war under the scheme by which the War Office allowed them to return for study; and lastly, there are those who avoided military service until conscription came. The third class gave themselves every chance, presumably took hospital appointments before they were called up, and consequently need be of no further concern to anybody provided that the legitimate demands of the hospitals can be satisfied without them. The men who qualified during the war by availing themselves of the facilities secured by the Ministry of National Service seem to require only limited consideration. It must generally have been easy for them to take advantage of the system of seconding, and so to obtain at least three months' experience as residents in their own hospitals. In some cases it may be found wise to give such men early facilities for more prolonged experience in hospital, or to arrange graduate courses for them when they return to civil life.

It is the early volunteers who merit most consideration; and it is from amongst these men that the immediate supply of hospital residents should, we suggest, be found. They are entitled to this preference on grounds of patriotism, of long service with its attendant risks, and of the deadening influence of army medical routine, especially in the front line, on professional knowledge and resource. Amongst these men—those that are left of them—must be many who would already have begun to distinguish themselves in civil practice or in research. They now find themselves four years behind colleagues who were physically unfit or otherwise immune from military service, and in their absence a new generation has arisen ready to step into the resident posts which would otherwise have been theirs.

In this connexion it is of interest to turn to certain recent proposals of the Department of Repatriation and Demobilization of the Australian Imperial Force.

The intention of this scheme is educative; it is designed to afford opportunities for a number of officers of the A.A.M.C. to obtain post-graduate instruction in the United Kingdom before returning to Australia. In this way not only will these medical officers be assisted in helping themselves, but the Australian civil population will be safeguarded against an influx of doctors who have had no training in the exigencies of civil practice. Medical officers of the Australian force who desire to avail themselves of this proposal will be struck off the strength of their units for a period of at least three months, while those who only graduated shortly before enlistment will be granted the opportunity of serving for six to twelve months as house-physician or house-surgeon at a general (non-military) hospital, either in the provinces of this country or in Australia. During this period of study or service in hospital the medical officer will receive full pay and allowances, together with 5s. a day subsistence allowance and such tuition fees as are approved by the Director-General on the recommendation of the Director of Education. Further, the medical officer will retain the emoluments of any post he may hold. At the end of the period, or at any time if his conduct has been unsatisfactory, he will be returned to his unit or repatriated.

This scheme, so far as it applies to resident hospital appointments in the United Kingdom, while easing the plight of some civil hospitals, should not materially prejudice the chances of the younger British medical officers whose case we have been discussing, if, as we are informed, the number of Australian medical officers availing themselves of the scheme will not be large. But it seems opportune to call the attention of certain Government departments in this country, and of the professional committees, to this admirable and far-seeing policy of the Australian Government, and to suggest that the mother country should not be backward in following this ensample. Have the War Office or the Treasury, or the Ministry of Labour, considered the practicability of providing medical officers in the British army with subsidized facilities such as Australia is offering? This form of seconding would at any event keep a supply of young medical officers available in case of urgent military need; and if demobilization proved slower than was anticipated, the plan would later on enable the older men to be released within a reasonable time while saving the younger medical officers from professional stagnation.

We have endeavoured to state the arguments for and against the methodical release of junior medical officers to fill resident appointments in the civil hospitals of this country. Briefly, our view of the matter is that a limited number of the younger medical officers should be made available for hospitals experiencing serious difficulty in carrying on their work; but while the authorities of the civil hospitals cannot as yet expect to return to pre-war conditions they should be made alive to the fact that they will be serving the interests of the patients in their institutions, of the community in the future, and of young men who have deserved well of the country, by giving them preference in the selection of residents. The withdrawals from the navy and army should be confined to those medical officers who volunteered early in the war.

A timely letter upon this aspect of the matter is printed in our correspondence columns this week; the writer, "F.R.S.," is a distinguished teacher. The Government departments concerned ought, we submit, to work out some scheme—on the lines possibly of the proposal of the Australian Government—whereby the men withdrawn may still be at hand for military service should the occasion arise. The Treasury may not willingly grant terms of subsidized service on so generous a scale as is indicated in the Australian scheme; but the Government of the United Kingdom should be ready to risk an investment willingly undertaken in a spirit of statesmanship by one of its daughter states.

SENSATION AND THE CEREBRAL CORTEX.

DR. HENRY HEAD, in an article which occupies an entire number of *Brain* (vol. xli, Part II), has given in great detail an account of an elaborate and painstaking research into one of the most difficult of neurological problems—the relations of sensation and the cerebral cortex. The subject matter is highly technical, and the article will be studied in its entirety by neurologists. It deals with such questions as the integration of afferent impulses, the forms assumed by disturbances of sensation due to cortical and subcortical lesions, tests which appeal to the cortex and to the optic thalamus, and principles which determine the anatomical localization of sensory function in the cortex.

Dr. Head points out that between the impact of a physical stimulus and the sensation which it evokes many physiological changes occur which normally do not enter consciousness, and which can only be discovered by some form of dissociation. He describes also how perfectly the reactions of the optic thalamus express the non-discriminative aspects of sensation when the cortical control of the thalamus is removed. The task of the central nervous system in integrating the effects of a stimulus—sorting, combining, and inhibiting them—is proved to be carried out by certain end organs, or receptors, and to be separate from consciousness; and the modification of afferent impulses on their way to centres where they can form the underlying basis of sensation is described. The cortex and the optic thalamus are the two terminal physiological centres on which the final products of integration act.

Many afferent impulses never form the basis of a sensation. They control reflex activity or they co-ordinate movements, and they do not traverse the whole length of the central nervous system. Impulses, too, which fail to excite consciousness do not necessarily cease to exert a physiological influence. They may be merely repressed, ready to show themselves as soon as the dominant influence is withdrawn.

Dr. Head describes the influence, on the nature of the response of a reflex arc, of previous occurrences in it, also on a sensation or on the recognition of spacial relationships, and the bond between this factor and the phenomena of adaptation. The effect on projected sensation of the removal of cortical influence, whereby the activity of the optic thalamus is uncontrolled, is pointed out, and it is shown also that these factors in sensation do not depend primarily on judgement or conscious association, but are due largely to physiological activities. Finally, an account is given of the methods employed in the various tests, and a clinical description is added of some of the cases on which the research was based.

The monograph is replete with observations of a high scientific value on a fascinating, if difficult, subject, and it redounds greatly to the credit of one of the master minds of British neurology.

CLINICAL MEETING OF THE BRITISH MEDICAL ASSOCIATION IN APRIL.

As already announced in our last two issues, the British Medical Association has decided to hold a meeting in London this spring to discuss scientific and clinical matters, more especially in relation to work done during the war. For the convenience of Dominion and American medical officers it has been arranged to hold the meeting in the second week of April. On the evening of Tuesday, April 8th, the members and visitors will be received by the President of the Association, Sir Clifford Allbutt. The work of the conference will be divided into three sections —of medicine, of surgery, and of preventive medicine and pathology. The Sections will meet on Wednesday, April 9th, Thursday, April 10th, and on the morning also of Friday, April 11th. A general committee was formed at the preliminary meeting on January 14th, and Major-General Cuthbert Wallace, C.B., C.M.G., Colonel S. Maynard Smith, C.B., and Lieut.-Colonel Gordon M. Holmes, C.M.G., have consented to act as general secretaries. A subcommittee is engaged in the selection of a suitable building for the meeting, and in making arrangements for evening receptions, and for hotels and private hospitality. The clinical and scientific work of the meeting and its sections is being organized by a programme subcommittee, which met for the first time on January 24th. There were present Colonel J. G. Adami, F.R.S., C.A.M.C., Colonel C. T. M. de Crespigny, A.A.M.C., Sir Walter M. Fletcher, F.R.S., Secretary of the Medical Research Committee; Colonel H. M. W. Gray, C.B., Colonel L. W. Harrison, D.S.O., Surgeon Commander D. W. Hewitt, C.M.G., representing the Medical Director-General R.N.; Lieut.-Colonel Gordon Holmes, C.M.G.; Lieut.-Colonel C. J. Martin, C.M.G., F.R.S., A.A.M.C.; Lieut.-Colonel F. W. Mott, F.R.S.; Lieut.-Colonel Bernard Myers, C.M.G., N.Z.M.C.; Colonel R. D. Rudolf, C.B.E., C.A.M.C.; Professor S. G. Shattock, F.R.S.; Colonel P. G. Stock, C.B., D.D.M.S. South African Defence Force; Colonel A. M. Whaley of the United States Army Medical Service; Colonel Maynard Smith, C.B.; Dr. R. T. Leiper, London School of Tropical Medicine; Dr. G. E. Haslip, Treasurer of the Association; and Dr. Dawson Williams. On the proposal of Dr. Haslip, seconded by Colonel C. J. Martin, Colonel Adami was appointed chairman. The business before the subcommittee included the nomination of organizing secretaries and the laying down of general lines for the scientific work of the conference. It was generally held that the meeting should be, as far as possible, practical in character, and that its main feature should be the demonstration of results and the gathering of lessons for future guidance in civil practice, together with a limited number of organized discussions on the most important general topics. In a meeting of the kind contemplated it was agreed that practical demonstrations would be preferable to formal addresses, and that debate and criticism should follow ordered lines.

DANISH COURTESY.

OFFICERS of the R.A.M.C. recently with the British military mission in Denmark met a very warm welcome in that country. The Royal Family, officials, and private persons alike went out of their way to show hospitality not only to the prisoners of war returning from Germany, but also to the staff sent out from England to arrange for their repatriation. For more than four years the Danes have necessarily avoided expressing their traditional affection for "Old England," but since the armistice they have felt free to show all the warmth of their sympathy. As a consequence our soldiers returning through Denmark have enjoyed almost embarrassing demonstrations of friendship, and "Rule Britannia" is received with enthusiasm in all the restaurants and places of amusement of Copenhagen. Early in January the staff of the Fredericksberg Hospital gave a dinner in honour of the medical members of the British mission, and the occasion was much enjoyed both by guests and hosts. During the evening Dr. Carl Jörgensen toasted the visitors in a graceful speech. He told how the youths of Denmark from their earliest days were taught to venerate the country of Shakespeare and Byron, of Dickens and Kipling, and how Danish medical men looked with affection to the home of Jenner, Lister, Moynihan, and Mackenzie. He continued: "Five years ago we admired you as the most free people of Europe, because you refrained from conscription. Later, we had to admire still more, because England submitted to the raising of that glorious army now returning victorious from the most terrible war in history.' The British officers made fitting replies to this very flattering address, and their relations with Danish colleagues in the prisoners' camps and on social occasions throughout the period of repatriation duty were most cordial. Most medical men in Denmark have a fair knowledge of English, and in conversation many of them expressed the wish that more opportunities for graduate work should be offered them in England. They also mentioned a desire that English medical books and periodicals should be made more easily available for the profession in Denmark, a matter to which we have on several occasions called the attention of British publishers. We hope also that it is receiving the consideration of our medical societies, and that they will see their way to present copies of their transactions and proceedings to the principal medical libraries in Denmark and other Scandinavian countries.

THE HISTORY OF ST. BARTHOLOMEW'S HOSPITAL.

DR. NORMAN MOORE, who has long been engaged on a history of the great London medical foundation with which he has so long been connected, has completed his task, and his *History of St. Bartholomew's Hospital* will be issued next week. It is in two volumes, which, taken together, contain 1,640 pages and 47 illustrations, which are chiefly reproductions of ancient charters. The first volume treats of the period from Henry I to Richard II, and includes the life of Rahere, the founder, and of his successor, Thomas of St. Osyths, a long chapter on the period of Henry FitzAilwin, the first mayor of London, and others on the reigns of Henry III, Edward I, Edward II, Edward III, and Richard II. Isidore of Seville is treated as showing the medical knowledge in London of the twelfth and early thirteenth centuries, and John Mirfeld as illustrative of the knowledge prevailing in the reign of Richard II. The second volume contains the history of the hospital from the reign of Henry IV to that of our present king. It describes the work of John Cok, the writer of the hospital cartulary, explains the mediaeval estate of the hospital and its transactions with various ancient foundations. The new order of the reign of Henry VIII and the ledgers and journals which begin at that period and their continuations to the present day are set forth. The Elizabethan physicians are mentioned and are followed by a chapter on Harvey and by another on his successors, all the subsequent physicians. The surgeons in their successive stages of incorporation are described, and a separate chapter is given to Abernethy and another to his successors, the subsequent surgeons. Further chapters are given to the apothecaries and the other members of the staff, to the matrons, sisters, and nurses, the officials, the administrators, the medical school, the buildings, and the patients. An index of 105 pages of three columns each concludes the work. The price of the book is three guineas, and it may be obtained from the Clerk, St. Bartholomew's Hospital. It is a present from Dr. Norman Moore to St. Bartholomew's Hospital, and the proceeds of the sale will be given to the hospital. The publishers are Messrs. C. Arthur Pearson, Ltd.

GLIMPSES OF INFLUENZA IN THE PAST.

THE disease now so well known as influenza was familiar to physicians from remote antiquity as a catarrhal pestilential fever. Among the people in different epidemics it went by various names, most of them indicative of novelty. Thus, in this country it was known in 1558 as the "new burning ague," in 1562 as the "new disease," the "new ague," and—with a touch of irony—the "new delight" and the "gentle correction." In France it was called *grippe* from the suddenness of its onset (*agripper*, to seize), *coquette* and *coqueluche* from the capriciousness of its manifestations, while the universality of its diffusion was designated as *la générale*. For the same reason the Germans called it *Modefieber*, and from the suddenness of attack *Blitzkatarrh* (lightning cold). Interesting descriptions are given by keen-sighted non-professional witnesses. In 1562 Mary Queen of Scots fell a victim to the prevailing epidemic. Randolph, Elizabeth's ambassador, writes to Cecil from Edinburgh in November: "Maye it please your Honer immediately upon the Queen's arrivall here, she fell acquaynted with a new disease that is common in this towne, called here the newe acquayantance, which passes also throughe her whole Courte, neither sparing lordes, ladies, nor damoysells, not so much as either Frenche or English. It ys a plague in their heades that have it and a soreness in their stomackes, with a great coughe, that remayneth with some longer, with others shorter tyme, as yt findeth after bodies for the nature of the disease. The quene kept her bed six days. There was no appearance of danger, nor manie that die of the disease, excepte some olde folkes. My lord of Murray is now presently in it, the lord of Lidingetone hathe it, and I am ashamed to say that I have byne free of it, seeing it seketh acquayantance at all man's handes." Nearly three centuries later we have an account by Thomas Carlyle in a letter written in January, 1837, to his young sister, Mrs. Hanning, then living at Manchester: "All people have got a thing they call Influenza, a dirty, feverish kind of cold; very miserable and so general as was hardly ever seen. Printing offices, Manufactories, Tailor shops and such like are struck silent, every second man lying *sniftering* in his respective place of abode. The same seems to be the rule in the North too. I suppose the miserable temperate climate may be the cause. Worse weather never fell from the Lift, to my judgment, than we have here. Reek, mist, cold, wet; the day before yesterday there was one of our completest London fogs—a thing of which I suppose you even at Manchester can form no kind of notion." Among the innumerable theories as to the cause of the disease that of the Scottish writer Patrick Walker deserves mention. In his life of Alexander Peden, the famous Covenanting leader, speaking of the epidemic of 1712 he attributes the "new burning agues" to "the effects and evidences of God's displeasure appearing more and more against us since the incorporating unions, mingling ourselves with the people of these abominations, making ourselves liable to the judgments, of which we are deeply shaming." The "people of these abominations" were the English, the incorporating union was the Union of the Crowns in 1707.

DRIED AND LIQUID EGGS.

THE report by Dr. A. W. J. Macfadden, C.B., chief inspector of foods, Local Government Board, on the work of inspectors of foods in the year 1917–18, has been issued as a separate pamphlet.[1] It deals at some length with the difficulties created by the importation of liquid eggs from China. Before the war the bulk of this material went to Germany, and the relatively small quantities imported into this country were used principally for industrial purposes, such as leather dressing, though to a limited extent also for confectionery. After the outbreak of war consignments arrived at ports in this country as cargoes in prize ships, and later on large quantities were imported in the ordinary course of trade. Usually the egg yolk and egg albumen were sent separately, and the albumen might come in a fluid state with preservative added, or in a crystalline dried form. The analyst to the City of London found samples of yolk to contain boric acid varying in amounts from 1.35 to 2.08 per cent., sometimes, however, common salt up to 10 per cent. was used with a smaller amount of boric acid. When liquid egg is used in the manufacture of cakes, biscuits, etc., the amount of boric acid in the finished food as eaten is reduced to about five grains a pound. More recently, however, liquid egg appeared on the market in large quantities packed for domestic use in small tins and jars, reputed to contain the equivalent of from ten to twelve or more eggs. The statement, it is said, must have been based on the weights of very small eggs; some of the packages said to contain "one dozen new laid eggs" weighed 12 oz., but twelve market eggs of good average size would weigh about twice this amount. The product in this form became available to the general public for use in milk puddings, pancakes, and so on; when used for these purposes the amount of boric acid consumed by the individual would be considerable. Although some of the packers put a notice on the smaller receptacles, sold retail, to the effect that they should not be used for omelettes or scrambled eggs, it is not known whether this injunction is obeyed in hotels, restaurants, and similar places. Investigations made by the Government chemist revealed the presence of boric acid in certain samples varying in amount from 49 to 113.4 grains to the pound. Compared with the composition of average genuine hen's eggs the preparations contained too much water, some of it probably due to the addition of boric acid in watery solution. It was also observed that whereas in genuine eggs the weight of white is approximately twice the weight of yolk, in most of the samples there was more yolk than white; for this reason, in spite of the added water, the calorific value of the contents of the jars and tins fell, with one exception, within the range of that of genuine eggs. Some public health authorities have required that the material shall be sold only to firms engaged in the bakery, wholesale confectionery and allied trades, the proportion of boric acid ultimately intended for human consumption to be negligible in amount. It has further been provided by these authorities that the egg material shall not be sold to the general public by retail over the counter, and that in order to ensure this, the receptacles should be made to contain not less than 7 lb. Dr. Macfadden thinks that the importation of egg products from abroad will necessarily increase in the future, and advises that it would be well, both from the point of view of the health of the consumer and of economy in shipping space, to arrange for the product to be shipped as dried eggs instead of in a liquid form. Dried egg imports have proved very successful, and if the eggs are prepared and packed properly in this form they are a wholesome and useful foodstuff.

[1] H.M. Stationery Office. 1918. To be purchased through any bookseller. Price 3d. net.

FILTER-PASSING VIRUS.

THE paper, printed at p. 127, by Sir John Rose Bradford, Captain Bashford, and Captain Wilson, on the presence of filter-passing virus in certain diseases, including a form of acute infectious polyneuritis, trench fever, influenza, and nephritis, records observations of so much general interest that it will be read by many readers unfamiliar with laboratory technicalities who may be perplexed by the statement with regard to the filters used. Being unable to supply the information from our own resources we applied to Lieut.-Colonel C. J. Martin, F.R.S., who, we are glad to learn, has resumed his duties as Director of the Lister Institute. The Berkefeld filters are

made of compressed siliceous earth, not baked, and are more pervious than porcelain filters. They used to be made in three grades: W (Wenig), least pervious; N (normal), of average perviousness; and V (Voll), most pervious. The Massen filter, like the Chamberland, is of baked biscuit porcelain. The former is of larger grain, and therefore more pervious. The filter used by Nicolle and Lebailly was Chamberland L2, which is believed to be of the same material as the ordinary Chamberland filter, but of a different shape and more convenient for laboratory work. As a standard of comparison, it may be noted that the influenza bacillus is 1.5 μ long and 0.3 μ thick; the virus of poliomyelitis, which passes through Berkefeld N and V, is said to be 0.2 μ in diameter.

CHIEF DEMOBILIZATION MINISTER.

SIR AUCKLAND GEDDES has undertaken, in succession to his brother Sir Eric Geddes, the duties of chief demobilization minister in addition to his responsibilities as Minister of Reconstruction. It will be recalled that Sir Eric Geddes, at the request of the Prime Minister, acted for the Government in this capacity to co-ordinate the work of the various departments. Sir Eric is at the present time a Cabinet Minister without portfolio, but he is shortly to become Minister of Ways and Communications, and with this task in view has been anxious to be relieved of demobilization cares. His brother, Sir Auckland, is intimately acquainted with the problems from his experience as Minister of National Service. This department has passed in the armistice from the active to the passive state, but its machinery and records are, of course, available; and, in the discharge of the additional responsibilities placed upon him, Sir Auckland will, it is understood, have the aid of a number of old colleagues of the National Service Ministry.

THE MEDICAL OFFICERSHIP OF THE LOCAL GOVERNMENT BOARD.

IT is announced that Sir Arthur Newsholme, K.C.B., will shortly retire from the position of medical officer to the Local Government Board. It is probable that he will prove to be the last occupant of that office, since it appears to be the intention of the Government to press the Ministry of Health Bill early in the new session. When Sir John Simon, the first occupant of that post, vacated office in 1876, in the circumstances mentioned last week, he was succeeded by Dr. Edward Seaton, who, however, resigned in 1879 (he died in the following year) and was succeeded by Sir George Buchanan, who held the appointment with great distinction to himself and great advantage to public health until 1892. He was succeeded by Sir Richard Thorne Thorne, who retained the office until his death at the end of 1899. The next occupant was Sir William Henry Power, who held the office from 1899 to 1908; he was succeeded by Sir Arthur Newsholme.

MEDICAL GRADUATE COURSE IN LONDON.

THE Fellowship of Medicine has arranged with the medical schools in London for "an emergency post-graduate" course of three months for qualified medical men belonging to the medical services of the Royal Navy, Army, Air Force, the overseas contingents, the United States and Allies. Officers joining the course will be admitted to the general practice of the hospitals, including the clinical work of the wards and out-patient departments, clinical lectures and demonstrations, *post-mortem* demonstrations and laboratory work. Tickets for the whole course, or for one or two months, are issued at the rate of £3 10s. for each month. They can be obtained from the Secretary of the Fellowship, 1, Wimpole Street, London, W.1.

THE PREVENTIVE TREATMENT OF VENEREAL DISEASES.

A MEETING convened by the Faculty of Insurance (which represents the large approved societies) was held at Central Buildings, Westminster, on January 28th, to discuss certain aspects of venereal diseases as an urgent health problem. Sir KINGSLEY WOOD, M.P., chairman of the Faculty, presided.

Mr. E. B. TURNER, after describing the two forms of venereal diseases and the extent to which they prevailed, said that the only absolutely certain preventive was not to run the risk of infection, then the incidental cases which did not depend upon an act of immorality would soon disappear also. As to prophylactic measures, he differed entirely from the writers (Sir William Osler and his colleagues) of the recent letter in the *Times*, though he recognized that, equally with himself and those who thought with him, they were acting in perfect good faith and working towards the same end. It was suggested in that letter that it should be made known, primarily to men of the forces but ultimately, of course, to all young persons, that there were methods by which, before running the risk of infection, they could safeguard themselves against its pathological consequences. Such a procedure, he believed, so far from reducing the number of cases in the population, would actually increase them. The issue of these preventive "packets," in the first place, would induce a feeling of false security. Moreover, such methods of chemical prophylaxis, to be at all effective, must be carried out with all the care with which surgeons performed their surgical toilet for an aseptic operation. He had himself seen five educated young men of the officer class, three of whom were suffering from syphilis and two from gonorrhœa, and four of the five assured him that they would never have gone astray had they not been assured beforehand of the efficacy of such an expedient. If the conditions under which the prophylactic were administered were rigorous, like a laboratory experiment, he granted that in few cases would there be infection; but under ordinary conditions, with half-drunk and excited men, in places which made proper care impossible, the value of the expedient was quite different. He believed also that fear of infection was a powerful deterrent, and that, to take a parallel case, the standard of morality among young women had greatly deteriorated during the last forty years, owing to Malthusian propaganda and the sale and display of anti-conception appliances. Previously fear of the consequences had been a most potent factor in keeping thousands of young women chaste. He read a memorandum by Colonel W. F. Snow, of the medical service of the American army, who stated that the supply of the prophylactic packet began in the United States army about 1912, combined with a propaganda of warning against risk, and a system of early detection and treatment of infected men. It was found that for various reasons the men could not be relied upon to use the packets promptly and thoroughly, while the practical administrative advantages of early treatment became more and more emphasized, with the result that the official status of the packet was abandoned in the enlarged programme for combating venereal diseases at the commencement of the war. Mr. Turner dwelt upon the advantages of early treatment, and pleaded for more education of the public, combined with a wider provision of venereal disease clinics.

Mr. P. ROCKLIFF, Chairman of the London Insurance Committee, said that as insurance bodies had been advised to forego their misconduct rule which forbade payment of benefit in cases of venereal diseases, certain influential members of the Joint Committee of Approved Societies had determined to take an active part in spreading the knowledge of simple sanitary measures for the prevention of infection. The matter concerned not only the men who actually ran the risk, but their present or future wives (many of them insured) and their children. The present policy of the National Council for Combating Venereal Diseases appeared to be to offer treatment only to those who might have become infected. He thought it desirable to establish a society for the prevention (not merely the cure) of venereal diseases. Even though, by spreading the knowledge of the facts or furnishing assistance in obtaining means of protection, the Venereal Diseases Act, 1917,

was infringed, the risk of prosecution would be gladly undertaken by leading men interested in the preservation of the health of members of the trade unions and friendly societies.

Sir MALCOLM MORRIS deplored the controversy which had arisen. He could not agree with the signatories to the letter in the *Times*, nor could he compromise, because it was a matter of conscience, and he did not doubt that the signatories to the letter were equally positive and unyielding. The obvious recourse was to a third party, and he suggested the President of the Local Government Board as adjudicator, assisted by assessors on both sides.

Sir BERTRAND DAWSON, while agreeing with the suggestion of a tribunal, thought it should be purely medical, with the president of one of the Royal Colleges at its head. He believed that the application of preventive treatment—that is, whatever was necessary to stop the disease before or after risk of infection—was desirable, though he agreed that no preventive method was wholly efficient. It was merely a question of discovering what method would allow the smallest incidence of disease after exposure to danger. As to the ethical point of view, he had yet to learn that to make people healthy resulted in a slackening of the moral fibre. If it were the fact that preventive treatment was advantageous when applied before infection, any man was taking a desperate risk who said that such measures should not be made available. Sir Bertrand Dawson also insisted that the early treatment which the National Council advocated merely camouflaged prevention. What was the difference between 10.45 o'clock and 11.15—between applying preventive treatment before infection and applying it immediately after, when the disease had not yet developed?

Dr. OTTO MAY agreed with Sir Bertrand Dawson. Major MCGIBBON, of the New Zealand forces, said that prophylactic expedients had been used (with the greatest reluctance on moral grounds) for the troops from that dominion; he hoped that on demobilization an effort would be made by energetic State action to clear up the whole position. Dr. LEONARD HILL thought that before talking of individual morality in this matter it was necessary to deal with the morality of the State, which permitted millions of its citizens to dwell under indecent housing conditions. Lieut.-Colonel Sir J. W. BARRETT (Australian A.M.C.), while supporting the scheme for local clinics, thought that geographical reasons would make it necessary to use prophylactic measures, which he had found effective among the men in Egypt, when combined with instruction by a competent and sympathetic medical officer. The Rev. J. SCOTT LIDGETT and Mrs. GOTTO defended the policy of the National Council, and the meeting closed with a vote of thanks to Mr. Turner.

THE WAR.

CASUALTIES IN THE MEDICAL SERVICES.

ARMY.

Died on Service.

CAPTAIN J. WILSON, R.A.M.C.

Captain John Wilson, R.A.M.C., died of pneumonia in Palestine on December 30th, aged 41. He was born in 1877, educated at Hillhead High School, Glasgow, and at Glasgow University, and took the Scottish triple qualification in 1903. Before the war he was in practice at Burnhope, County Durham. He took a temporary commission as lieutenant in the R.A.M.C. in May, 1917, and was promoted to captain after a year's service. He had served in Egypt and Palestine, in the 78th General Hospital. His brother, Captain Alex S. Wilson, has also been serving with a temporary commission in the R.A.M.C.

Repatriated.

Major W. J. Hirst, R.A.M.C.(T.F.).
Captain F. H. McCaughey, R.A.M.C. (temporary).
Captain A. T. I. Macdonald, R.A.M.C. (temporary).
Captain S. S. Meighan, R.A.M.C.(T.F.).
Captain F. J. Nattrass, R.A.M.C.(T.F.).
Captain D. M. Spring, R.A.M.C.(T.F.).

CORRECTION: CAPTAIN A. J. MILNE, S.A.M.C.

It was assumed in our issue of January 11th, p. 54, that Captain A. J. Milne, S.A.M.C., whose death was recorded in the official casualty list published on December 30th, was Captain Arthur John Milne, S.A.M.C. We understand that, according to the latest information received by his family, Captain Arthur John Milne is happily still alive.

DEATHS AMONG SONS OF MEDICAL MEN.

Clarke-Morris, John, Lieutenant West Riding Regiment (the Duke of Wellington's, late 33rd Foot), youngest son of the late Dr. H. Clarke-Morris, accidentally killed flying in France on January 13th, aged 19. He had recently joined the Royal Air Force.

Semple, Robert Edward Watson, M.C., Captain Royal Field Artillery, second and only surviving son of Lieut.-Colonel Sir David Semple, R.A.M.C.(ret.), of Royston, Hertfordshire, whose death was briefly announced in the BRITISH MEDICAL JOURNAL of November 23rd, 1918, died at Rouen, of wounds, on November 5th, aged 22. He was educated at Campbell College, Belfast, and at the Royal Military Academy, joining the Artillery as second lieutenant in 1915, soon after which he went to the front, and had been there over three years, at first attached to the Guards Artillery, and later to a Guards Trench Mortar Battery, which he had commanded for nearly a year past. He had taken part in the battles of the Somme, Messines, and Cambrai, also of Ypres and Arras. In December, 1917, he received the Military Cross, and was afterwards again mentioned in dispatches. He became lieutenant on July 1st, 1917, and captain on February 8th, 1918. His elder brother, Second Lieutenant W. D. Semple, King's Royal Rifle Corps, was killed in France towards the end of July, 1916.

NOTES.

THE FRENCH ARMY DURING THE WAR.

THE following official statistics of the number of men the French had under arms on the dates mentioned are of interest in connexion with the casualty lists recently published:

	Officers.	Other Ranks.	Total.
Aug. 15, 1914	92,838	3,781,000	3,873,838
Feb. 1, 1915	97,753	4,900,000	4,997,753
Jan. 1, 1916	109,614	5,096,000	5,205,614
Jan. 1, 1917	115,074	5,026,000	5,141,074
Jan. 1, 1918	128,372	5,064,000	5,192,372

The numbers of January 1st, 1918, were distributed as follows: Infantry, 2,106,575; Artillery, 899,845; Air Force, 59,275; Cavalry, 166,422; Engineers, 185,110.

General Peyton C. March, chief of the staff of the American army in France, has given figures of the forces in France on the day of the armistice which are difficult to reconcile with these. His statement was founded on the ration strength, and included every man who had to be fed, combatant and non-combatant, and supply:

French	2,559,000
United States	1,950,000
British (including the Portuguese serving with them)	1,718,000
Belgians and Italians	200,000

When the armistice was signed there were about 3,500,000 Imperial British officers and men on the pay and ration strength of the British army. The Royal Air Force had a strength of about 295,000 officers and men.

THE PILKINGTON SPECIAL (ORTHOPAEDIC) HOSPITAL.

A well illustrated description of the Pilkington Special Hospital for Disabled Soldiers and Sailors at St. Helens, Lancashire, has been published in *Engineering* (January 3rd, 1919). The facts and drawings will be of considerable value to any one called upon to advise on the planning of such an institution. The accommodation is sufficient for the treatment of the following numbers of men a day: Hydrotherapy, 800; thermotherapy, 150; mechanotherapy, 600; electro and massage, 600; remedial gymnastics, 400; curative workshops, 100. There is an operating room, a very necessary part of such a special hospital; also a radio room containing a complete installation in which a powerful transformer type apparatus is used. The account is written by Mr. James R. Kerr, Ch.M., surgeon in charge of the hospital.

THE GREEK ARMY IN THE BALKAN OFFENSIVE.

It was noted last week that at the time the armistice with Turkey was completed Greek troops under the command of General Milne were ready to take part in the advance on Constantinople. General Milne, in his dispatch, expressed his admiration for the gallantry and determination of the Hellenic army and his gratitude to the corps and divisional commanders for their ready co-operation at all times. A pamphlet entitled *The Greek Army and the Recent Balkan Offensive*, published in

London by Messrs. George Allen and Unwin (1s. 6d. net.), gives a brief account of the doings of the Greek army during the Balkan offensive, which culminated in the capitulation of Bulgaria. It consists of a series of official communiqués, speeches, telegrams, and press comments, including summaries of the campaign. It is well illustrated by numerous photographs, and has a map of the front.

CORRECTION.

In mentioning the conferment of the honour of K.C.M.G. on Major-General W. W. Pike, A.M.S., we fell into error in stating that he had been D.M.S. East Africa. After holding the appointment of D.M.S. First Army, France, he went to East Africa on a special commission for the War Office for ten months in 1917–18.

England and Wales.

INSTITUTE OF MASSAGE AND REMEDIAL GYMNASTICS.

In the autumn of 1916 a society was formed in Manchester under the name of the Institute of Massage and Remedial Gymnastics, with the intention of improving the training and status of persons engaged in medical gymnastics, massage, electro-therapeutics, and kindred subjects. Shortly afterwards it issued a syllabus of training, outlining a course to last thirty weeks. A year ago it was announced that negotiations had been opened with the Incorporated Society of Trained Masseuses, and that an agreement had been come to between the two bodies. At the recent annual meeting of the Institute in Manchester Sir William Milligan stated that a charter had been drafted in consultation with the Incorporated Society, expressing the settled views of the two bodies. It would shortly be submitted to the Privy Council, and if approved would become the charter of a new society. The amalgamation would, it was anticipated, yield a strong body, financially and otherwise sound, with a council elected by postal ballot of all the members, and therefore representative of all those engaged in massage throughout the country. The scheme provides for the admission of male certificate holders to membership and representation.

MEDICAL DEMOBILIZATION AND INSURANCE PRACTICE IN LONDON.

At the meeting of the London Insurance Committee, on January 23rd, Sir Kingsley Wood stated that the number of doctors on the London panel list on January 1st was 1,249, and that since the armistice 47 London panel doctors had been demobilized and 178 were still serving. He pleaded for a rigorous examination of the whole medical service in London. The present arrangement by which a doctor could have an unlimited number of persons on his list was unsatisfactory. The Committee should take power in future contracts to limit the lists. Dr. Richmond stated that the number of doctors on the panel was not sufficient for the one and a half million insured persons in London; and, in reply to an interrupter who said that for the proper distribution of doctor power over the area a system of State service was needed, said that before the exhaustive review contemplated had been completed such a service might be upon them. Mrs. Handel Booth said that in her experience doctors who had the largest panel lists gave the best service, because, as a rule, they had fewer private patients. Mr. David Davis, chairman of the Medical Service Subcommittee, said that, in spite of the vastness of the insured population, the number of complaints against doctors which were investigated by his subcommittee was less than 100 in a year. It was reported that the Commissioners had suggested that the time had arrived to consider the question of re-establishing, at the earliest date at which military exigencies permitted, an adequate service throughout each area as measured by a normal rather than a war standard of efficiency. In response to this suggestion, the Insurance Committee set up a special section to confer at once with representatives of the Panel Committee on the question of demobilization and to review the medical situation district by district. All doctors now carrying on insurance practice in London are being communicated with.

PRESENTATION TO DR. STACEY WILSON.

Dr. T. Stacey Wilson, who has retired from the office of honorary physician to the Birmingham General Hospital after twenty-nine years' service, was presented on January 22nd, in the board room of the hospital, with an illuminated and bound address, signed on behalf of the subscribers by the president, the chairmen of committees, and the senior physician and senior surgeon of the hospital. A portrait of Dr. Stacey Wilson was at the same time presented to the hospital. He became assistant physician in 1889, and full physician three years later; he served subsequently as chairman of the medical committee. He has given special attention to diseases of the circulation, and is the author of a work on the early diagnosis of heart failure. At the end of his term of office in 1917, he voluntarily continued work in order to help the hospital through the time of stress caused by the war, and was visiting physician to the 1st Birmingham Hospital at Rubery.

DIETARY TABLES.

The Local Government Board for England and Wales has issued a circular letter (January 24th) informing Poor Law authorities that they may now revert to the use of the dietary tables in force before the introduction of rationing. Pork, and all kinds of meat and meat articles other than butcher's meat, including tinned and preserved meat, are now outside the ration. Authorities will be required to keep within the Food Ministry's scales of rationed articles (butcher's meat, sugar, fats, and jam), and the present allowance of milk and cheese should not be increased without the concurrence of the local Food Control Committee. Further, it is notified that supplies of fish, poultry, lard, syrup, and eggs are limited at the present time. If the limitations indicated prevent the full restoration of the former dietary tables, any deficiency may be remedied either by a temporary revision of the tables or by the use of alternative articles as authorized on February 28th, 1917. In view of the changing food conditions, the Board has waived until September 30th the direction permitting a new or revised dietary table to come into operation only on one of the usual quarter days. The instruction of December 12th, 1917, permitting rations of potatoes and vegetables to be issued "according to appetite" in the same way as bread, is maintained.

CENTRAL MIDWIVES BOARD.

At a penal session of the Central Midwives Board, on January 23rd, Sir Francis Champneys in the chair, three fresh cases were heard. Two of the women were struck off the roll. Neglect in cases of ophthalmia neonatorum and general breaches of the rules were the chief charges. The final report concerning another midwife was satisfactory, and no action will be taken.

At the ordinary monthly meeting which followed, the following amended form of Draft Rule E 12 A was adopted:

A midwife must forthwith notify the local supervising authority of each case in which it is proposed to substitute artificial feeding for breast feeding.

Arrangements were made for the appointment of an assistant secretary to the board. It was resolved to make a representation to the Privy Council with regard to the expediency of modifying the constitution of the board, in accordance with a memorandum approved by it, and to forward to the same body copies of the branch rules framed by the board, including the rules deciding the conditions under which midwives may be suspended from practice in penal cases. The names of seventeen women were removed from the roll on their own application.

Scotland.

SCOTTISH POOR LAW MEDICAL OFFICERS' ASSOCIATION.

THE annual meeting of the Scottish Poor Law Medical Officers' Association was held in Glasgow on January 24th. It was reported that a circular had been sent to each parish council asking for an increase of 25 per cent. in salaries. Most of the replies were quite sympathetic, and only a few parish councils resented what they considered to be interference. The number of medical officers who have received an increase has not been ascertained, but it is known that in about 55 cases increases of from 25 to 50 per cent. were granted. It had not been necessary to issue advertisements warning medical men not to take appointments; the number of vacancies advertised was small, and the conditions were in all respects satisfactory.

THE CONTROL OF TUBERCULOSIS.

The Royal Victoria Hospital Tuberculosis Trust of Edinburgh helps to keep households together and a roof over their heads by giving subsidies while the breadwinner is under treatment in sanatorium, hospital, or elsewhere. Speaking at the annual meeting last week, Sir Robert Philip referred to the educational work carried on with the co-operation of other bodies, and to the efforts made to lessen the hardships of patients and their households and to maintain them in their proper place in the social scale. In an address to the Edinburgh School of Social Study and Training on the same day Sir Robert Philip dealt with fallacies as to tuberculosis, and instanced as the most obvious and common, since the introduction of the Insurance Act, the belief that it was possible to cure tuberculosis within a definite period. Tuberculosis could not be cured to order; and, while always essentially the same, it was infinitely various in type and degree, so that each case required special consideration. Referring to housing reform, he said that a larger house was not necessarily a better home. For the working man with a growing family there must be provided a home with its door opening directly to the outer air, on balcony or otherwise, with easy access to playground or garden. In the course of a recent visit to Glasgow Sir Edwin Cornwall, Chairman of the National Health Insurance Joint Committee, paid a visit to the Hairmyres colony for the treatment and industrial training of persons suffering from tuberculosis. It is now practically completed, and will provide accommodation for over 250 patients. The training will ultimately embrace all branches of arable farming, as well as stock farming and afforestation.

Correspondence.

THE MORTALITY OF CASES OF FRACTURED FEMUR.

SIR,—It is with diffidence that I venture to criticize Major-General Sir Anthony Bowlby's statements on this subject, but I do so because, if they are unchallenged, those who have not given special attention to the matter will receive a wrong impression of the appalling seriousness of this injury, especially in the early years of the war. It is a pity to diminish appreciation of the excellent progress in the handling of such cases which took place. Speaking generally, the enormous improvement in treatment, and consequently in results, is one of the brightest records of the medical service.

Mortality in the Forward Areas.—It may be assumed that Sir Anthony's figures were derived from the admission and discharge books of the units concerned. Without casting reflections on any one, it can be said that the diagnoses entered in these books in 1915 were unreliable, especially during battle periods. For example, the admission and discharge books of three busy casualty clearing stations, which received cases from the battlefields mentioned by Sir Anthony, record only 141 cases of "G.S.W. femur," 1 "fracture femur," 1 "fracture buttock," and 1 "fracture femur, old," during the first six months of 1915. Deaths amongst these numbered 23, which gives a mortality of 16 per cent., exactly what Sir Anthony says. The diagnoses entered in these books were almost always copied direct from the field "tallies," which in those days were often wellnigh illegible.

In cases of multiple injuries it frequently happened that fracture of the femur was not mentioned. Even as late as spring, 1917, this unreliability was shown by the fact that at several casualty clearing stations it was noted that considerably more cases of fractured femur passed through the operating theatre than were recorded as having been admitted. It often happened that the field diagnosis remained unaltered, and it even occurred in those early days that the names of patients put on the ambulance trains at congested and overworked casualty clearing stations were not entered in the books at all.

It is acknowledged that the proportion of fractured femurs amongst wounded men admitted to casualty clearing stations is approximately 1 in 50 to 60. On this reckoning it can be shown that, even if Sir Anthony's figures cover as much as the first six months of 1915, they are over 500 short.

Perhaps Sir Anthony's figures refer to cases in which fracture of the femur was the only injury, whereas those given in my book on *The Early Treatment of War Wounds* refer to all cases of this fracture. The estimation of mortality of "nearly 50 per cent. at one time of the war" was made from my own observation after I took up the work of a consultant surgeon at the front. It must be remembered that in the very early days cases were evacuated from the casualty clearing stations often before serious symptoms had time to develop. The officer in command of a New Zealand field ambulance objected to my estimate as being too low. He stated that, from his own investigation at casualty clearing stations regarding cases which had passed through his ambulance during the fighting on the Somme in 1916, the mortality was nearer 70 per cent. than 50 per cent.

I doubt also whether any of the surgeons who worked continuously in the casualty clearing stations will agree with Sir Anthony's low figure. The estimates of those with whom I have talked coincide with mine. Why was it so freely said by so many of them in the beginning of 1917 that if every case of fractured femur were submitted to primary amputation the mortality would be greatly reduced? Why was there such universal comment on the excellent condition in which fractured femurs arrived in casualty clearing stations of the Third Army during the fighting in April, 1917, and such pride in what was looked upon as a very low mortality of 15.6 per cent., although amputations were made in only 17 per cent. of 1,009 cases? Yet this mortality was only 0.4 per cent. better than that indicated by Sir Anthony. No return was received of cases which died during that time in the dressing stations of field ambulances.

I do not think that the mortality at casualty clearing stations has ever been below 10 per cent. during battle periods, except possibly in such units as were unusually well supplied with surgical teams in proportion to the amount of work to be done. Under the conditions of a rapid advance or retreat the death-rate mounts enormously.

Mortality at Base Hospitals in France.—In these hospitals, as at casualty clearing stations, cases of fractured femur were as a class one of the despairs of the surgeon in the early days. Even in 1916, 20 per cent. mortality was probably a low estimate, but in a paper published in July, 1917, by Captain (now Lieut.-Colonel) C. Max Page and Captain Le Mesurier, who had bestowed special care on their cases, the mortality was 10 in 125 cases, or 8 per cent. In 1918, in one of the special femur hospitals, the death-rate was as low as 3 per cent.

Mortality in Home Hospitals.—At as late a period as July, 1916, to February, 1917, out of 329 cases quoted by Max Page after an investigation conducted by him, the mortality was 13.6 per cent. It was certainly not less in 1915. At one of the best special femur hospitals, established in August, 1918, in England, there have been only three deaths in 271 cases, one of them being due to pneumonia, one to secondary haemorrhage, and one to sepsis. The first and second occurred within forty-eight hours of admission. Only one case was submitted to amputation.

These facts, in my judgement, fully establish the opinion expressed in the first paragraph of this letter.—I am, etc.,

London, W., Jan. 27th. H. M. W. GRAY.

HOSPITAL EXPERIENCE FOR JUNIOR R.A.M.C. OFFICERS.

SIR,—There are many young men who joined the R.A.M.C. immediately after qualification and have since been put to such duties that they have never had a chance of acquiring the clinical experience which would fit them for the practice of medicine when demobilized.

I have in mind a young officer who did distinguished physiological research at his university before qualification. The only experience he seems to have acquired is in signing forms and in the diagnosis of pellagra at a prisoners' camp. Commanding officers, it would seem, do not welcome an application from such junior officers for appointment to home hospital where experience can be gained. Cannot the Army Medical Advisory Board move in this matter, and, using the card index of the medical officers in the R.A.M.C., arrange that those without

experience should go to general hospitals for training before demobilization?

Further, cannot the teaching hospitals and general and special hospitals in this country prepare some scheme by which these men can acquire the experience they would have acquired in peace time by holding house appointments?—I am, etc.,

January 26th. F.R.S.

SIR,—I was much interested to read, in the BRITISH MEDICAL JOURNAL of January 25th, the views of Major G. F. P. Gibbons, R.A.M.C., on the priority of release of medical officers from the army. He voices the claims of the younger men who at the outbreak of war were students.

I know of many such men, like myself, who, having served in France before qualification, returned to England and "crammed" the final year's work into six months in order to obtain a commission in the R.A.M.C. at the earliest possible moment.

The majority of such officers have served practically all the time as M.O.'s to infantry and artillery units, or in field ambulances, where the opportunities for clinical study and experience are almost *nil*. Consequently, we feel that we must begin our studies afresh, and work for our university degree as soon as possible before we are sufficiently competent to embark upon any form of medical practice.

Surely, therefore, we have some claim to come under Group 43 (students), whose release from the army has already been ordered.—I am, etc.,

J. VINCENT BATES, M.C.,

Colchester, Jan. 26th. Temp. Captain (acting Major) R.A.M.C.

MEDICAL DEMOBILIZATION.

SIR,—In your issue of January 25th there are letters from correspondents who criticize details of the priority scheme of the Central Medical War Committee. As one of those responsible for the scheme I may be permitted to reply to the points raised.

The criticisms fall into two groups: (1) That the scheme is incomplete—for example, men of 60 years of age are left out. (2) That it is unjust—for example, the plaint of the "whole-timer" and of the man under 30 years of age. It would seem from these criticisms that your correspondents have not studied the explanation of the scheme, but confined their attention to the bare table.

The scheme is based on the recognition of certain facts. That: (1) A few characters mark all the men. (2) More characters mark some of the men. (3) Many characters mark a few men.

1. Two characters mark all the men: age and a period of service. There is no other universal character. Therefore age and service must give the primary classification.

2. Civil status and nature of work are secondary characters; they are of many kinds, and mark men unequally. These are brought into effect as modifications of the primary place of a man, by plus or minus points which advance or retard his position in the scale.

3. There are a host of exceptional characters that each mark relatively few men. To put these characters into the scale would make the scale so long as to render it unworkable. Therefore the exceptional must be dealt with exceptionally by the direct award of the Committee.

To the criticism that the scheme is incomplete, I reply that there is no character that can fail to count. It is said that men of 60 are omitted. This is not so. These men are exceptions, and will be dealt with accordingly. To the criticism that the value attached to some of the secondary characters is unjust, I reply that these were arrived at after the most exhaustive consideration by men of experience and judgement. The values arrived at are the resultant of many forces all of which have shaped that resultant.

In conclusion, I would like to give two warnings:

1. The more men there are content with their position in the scale as arrived at by the primary and secondary characters, and the fewer who make exceptional claims, the speedier will be the work of the Committee. A number of subcommittees have been appointed, and will sit five days a week to adjudicate on the exceptional claims. Even so, if thousands claim exceptional treatment we shall be snowed under, and the machine will go slow.

2. The Committee is not the demobilizing authority. Its work is to place the men in order of priority, and to apply for them in that order. The authorities will determine when and what number of men can be demobilized.—I am, etc.,

London, W., Jan. 27th. N. BISHOP HARMAN.

SIR,—May I protest against the recommendation of the Central Medical War Committee, that medical practitioners who have qualified during the war, after having been sent back from combatant service to qualify, are to be demobilized last of all?

I joined up in 1914, and after ten months in the infantry was sent home from France to qualify. I have had three and a half years in the army—three years on active service, and the last two and a half years without leave. After all this service I am told that I am to be demobilized last.

Having joined the R.A.M.C. as a temporary officer before conscription came in, I think it is only fair to be demobilized by date of commission with other temporary R.A.M.C. officers.

Surely I shall be able to obtain a resident post at a civilian hospital if demobilized.—I am, etc.,

January 7th. NON-MILITARIST.

GONORRHOEA AND DEMOBILIZATION.

SIR,—I think the suggestion made by Mr. Macalpine on the above subject in the BRITISH MEDICAL JOURNAL of January 18th, p. 87, quite a good one if there are enough medical officers to see it through properly. Any threat of compulsory treatment is bad, as many soldiers for various and obvious reasons wish to hide the fact that they are suffering from a urethritis, and are familiar with the dodge of passing a little urine and disposing of it just before seeing the doctor, if possible. This act removes all the threads from both the anterior and posterior urethra in a large number of cases, although a large proportion of those suffering from acute or subacute gonorrhoea would show the presence of the infection by the haziness of the urine. I do not believe that more than one in twenty of those suffering from threads in the urine harbour the gonococcus. There is a large class that secrete these threads from a damaged, usually contracted, urethra for many years, or for life, after recovery from the gonococcus. They marry and do not infect their wives. Even in this class of case nothing but benefit could result from suggesting the advisability of seeking special advice, a little dilatation being urgently needed to restore the mucous membrane to a healthy condition.

In cases in which the threads are not due to venereal disease I fail to see any harm, as Mr. Browdy does (see BRITISH MEDICAL JOURNAL of January 25th, p. 115), in directing these to a venereal clinic or specialist. Threads in such cases, if not due to some gross affection, such as tuberculosis, are caused usually by severe phosphaturia, onanism, or lithiasis. Such cases should certainly benefit by good advice, although it be given in a venereal clinic.

A good many anxious sufferers from threads keep up the condition by persistently injecting long after the necessity for such treatment has passed. In this way many hypochondriacs are made, and good advice is badly needed to break them of the habit.

A somewhat serious objection to the suggestion is that a good many men suffering from fairly advanced stricture of the urethra show no threads, and these, being passed sound, may be lulled into a sense of false security, and may disregard later on the warning an attenuated stream of urine should give.—I am, etc.,

London, W., Jan. 27th. W. WYNDHAM POWELL, F.R.C.S.

MOTHERS' PENSIONS.

SIR,—Some days ago you published a sympathetic review of the Report on Mothers' Pensions recently issued by the Local Government Board. May we, through your columns, say how cordially we welcome this evidence of departmental interest in a scheme which has done so much in most of the United States of America to promote the happiness and wellbeing of the necessitous widows of civilians and their children?

For more than a year the State Children's Association has been disseminating information regarding mothers' pensions, with the result that warm approval of the principle is widespread. Over 120 metropolitan, town, and

urban district councils, including those of Bethnal Green, Finsbury, Poplar, Holborn, Islington, St. Pancras, and Shoreditch; Sheffield, Portsmouth, West Ham, Cardiff, Oldham, Stoke-on-Trent, Huddersfield, Gateshead, and Willesden, have passed resolutions in favour of the adoption of such a scheme and urging on the Prime Minister and the Minister of Reconstruction its immediate promotion.

Infant welfare centres from all over the country, including those of Nottingham, Croydon, Sunderland, Manchester, Salford, Liverpool, Leicester, Leeds, and Perth, have taken similar action. Strong approval and support of the proposal have also come from such bodies as the National League for Health, Maternity and Child Welfare, the National Baby Week Council, the Women's Municipal Party, the Babies of the Empire Society, the Women's League of Service for Motherhood, and the Women's Civil Corps.

Many parliamentary candidates were approached on this important matter, and 200 of them expressed their interest and approval, several mentioning the subject in their election addresses and speeches. A considerable number of these candidates—nearly 70—has been elected and a strong parliamentary committee will, it is hoped, be formed to promote the necessary legislation—legislation which will prevent that separation of the mother from her children which does such incalculable harm to both, and will also abolish the present uncertain, unequal, and too often inadequate system of out-relief.

Tragic instances of the need for such a measure reach us constantly. We ask the help of your readers in securing for British widows and their children that steady improvement in health, in mental and moral development and above all in happiness which the pensions scheme makes possible for the widows and children of America.—We are, etc.,

(Signed) LYTTON, Chairman.
HENRY BENTINCK,
GEORGE TOULMIN, Vice-Chairmen.
ALBERT SPICER.
LOUISE OLIVER,
FRANCA BUXTON, Hon. Treasurers.
HENRIETTA O. BARNETT, Hon. Secretary.

State Children's Association,
53, Victoria Street, S.W.1.
January 21st.

ACIDOSIS.

SIR,—I have read most of the literature on acidosis published during the last five years, including the report to which Dr. Dougall so kindly directs my attention, and I am emphatically of his opinion that we have a good deal to learn on the subject. Not traces, but quantities, of acetone are found in the urine of many children who are in the initial stages of measles, pneumonia, influenza, poliomyelitis, and other febrile diseases, and in some of these cases the breath smells strongly of acetone.

What is the exact cause and significance of acetonuria no one knows, but it is certain that it is only an item in a sequence of events. If it is to be erected to the dignity of a separate disease, I fear its true explanation will be long delayed.—I am, etc.,

Wanstead Park, E., Jan. 20th. A. CAMPBELL STARK.

RISKS AND REWARDS.

SIR,—The letter in the JOURNAL of January 25th from "Undecorated Regular" carries no reply to my letter in your issue of January 4th, as any one who takes the trouble to read both will observe.

I notice that whilst he fails to contest, and thereby accepts, the accuracy of the statements I have made, his sole resource is to undertake the defence of the Regular R.A.M.C. from a charge which I, at any rate, have not made against it, namely, that it is responsible for the system of awarding decorations which prevails in the army.

I hardly expected such support (even if indirect and unintentional) for the contents of my letter from an officer of the Regular R.A.M.C., and am correspondingly grateful for it.—I am, etc.,

January 27th. FAIRPLAY.

VITAL STATISTICS IN ENGLAND AND WALES, 1918.

WE are indebted to the Registrar-General for the following statement showing the birth-rates and death-rates and the rate of infantile mortality in England and Wales and in certain parts of the country during 1918.

ENGLAND AND WALES.

Birth-rate, Death-rate, and Infant Mortality during the Year 1918 (Provisional Figures).

	Birth-rate per 1,000 Total Population.	Civilian Death-rate per 1,000 Civilian Population (Crude Rate).	Deaths Under One Year per 1,000 Births.
England and Wales*	17.7	?	97
96 great towns, including London (populations exceeding 50,000 at the Census of 1911)	17.6	18.1	106
148 smaller towns (populations from 20,000 to 50,000 at the Census of 1911)	18.0	16.1	94
London	15.8	18.7	107

* The civilian death-rate for England and Wales cannot be stated at present, the number of non-civilian deaths in the Fourth Quarter of 1918 not being available.

Obituary.

SIR JAMES SAWYER, M.D., F.R.C.P.LOND.,

Consulting Physician, Queen's Hospital, Birmingham.

SIR JAMES SAWYER died at his residence, Hatton, Warwick, on January 27th, in his 75th year. He was the son of Mr. James Sawyer of Carlisle, and received his medical education at Queen's College, Birmingham. He took the diploma of M.R.C.S.Eng. in 1866, and graduated M.B. in the University of London with first class honours in medicine in the following year, and M.D. in 1873. He became resident physician and medical tutor at Queen's Hospital, Birmingham, and retained the post until 1871, when he was appointed physician. When he retired and became a consulting physician he had been senior physician to the hospital for twenty-two years. He was also physician to the Children's Hospital from 1871 to 1876. In 1875 he was appointed professor of pathology in Queen's College, Birmingham, in 1878 he passed to the chair of materia medica and therapeutics, and in 1885 to that of medicine, an office from which he retired in 1891. He became a Member of the Royal College of Physicians of London in 1874 and was elected a Fellow in 1883. In 1908 he delivered the Lumleian Lectures, taking as his subject, "Points of practice in maladies of the heart." The subject had long interested him, and in 1870 he had issued a work on the physical diagnosis of diseases of the lungs and heart.

Sir James Sawyer had the pen of a ready writer, was a frequent contributor to the periodical press, and one of the founders, in 1872, of the *Birmingham Medical Review*. He was, however, above all things a practical physician, and his most important work, entitled *Contributions to Practical Medicine*, appeared first in 1886. Its success was immediate and continuous; he issued a fifth edition in 1912. The book deals with such subjects as the cause and treatment of insomnia, of constipation, and of asthma, and contains the text of his Lumleian Lectures. He took an interest in many things, among others in heraldry, and had a theory about the coat of arms granted by Henry VIII to the Royal College of Physicians of London. As usually shown, a hand from the clouds appears to be feeling the pulse of an arm in the centre of the coat. Sawyer maintained, and supported his view by reference to the actual grant in the College, that the hand was intended to express the heavenly power, and did not, when properly displayed, touch the arm. He was active in the affairs of Warwickshire, a J.P., and at one time chairman of the Warwickshire Chamber of Agriculture.

In early life he was an ardent politician; he became president of the Birmingham Conservative Association at a time when the prospects of the party were very discouraging. He was responsible for bringing Lord Randolph Churchill to oppose Mr. Bright in 1885. Four years later,

on the death of Mr. Bright, Sir James desired again to bring forward Lord Randolph Churchill, but his proposal met with strong opposition. He had never taken kindly to the alliance with the Liberal Unionist Party, and resigned his presidency of the Conservative Association in 1889. He received the honour of knighthood in 1885. He leaves a widow and two sons, one of whom is Lieut.-Colonel J. H. Sawyer, administrator of the 1st Southern General Hospital, assistant-physician to the General Hospital, Birmingham, and assistant to the chair of medicine in the University.

WE regret to record the death, which occurred last autumn, of Dr. JOSEPH SYLVESTER GALIZIA, of Sliema, Malta, a member of council of the Malta Branch of the British Medical Association. Dr. Galizia obtained the M.R.C.S. and L.R.C.P. diplomas in 1893, and afterwards graduated M.D. in the University of Malta. He practised many years in Malta, where he was one of the leading practitioners in the island and enjoyed a high reputation as a surgeon. He was junior surgeon to the local civil hospital and examiner in surgery and anatomy at the university. For several years he had held the position of honorary secretary and treasurer of the Malta Branch. His death from influenza, contracted in the discharge of his professional duties, is deeply felt by his colleagues and friends, who held him in high regard for his exceptional qualities of mind and heart.

DR. GEORGE WILLIAM MOULD, who died recently at his home at Llandrillo-yn-Rhos, Colwyn Bay, was born at Sudbury, Derbyshire, in October, 1838, the son of Thomas Mould of Dove Bank. He was educated at Queen's College, Birmingham, and obtained the diplomas of M.R.C.S.Eng. in 1858 and L.S.A. in 1862. After holding the post of house-surgeon to the Lancashire County Asylum, Prestwich, he obtained the appointment of medical superintendentship at Manchester Royal Lunatic Hospital, Cheadle, to which institution he was subsequently appointed consulting physician. He was also lecturer on and examiner in mental diseases at Victoria University, Manchester. He held the office of president of the Medico-Psychological Association in 1880, and was president of the Section of Psychological Medicine of the annual meeting of the British Medical Association in Manchester, 1902.

PROFESSOR GEORG GAFFKY, director of the Institute of Hygiene at Giessen, died recently at the age of 68. He graduated at Berlin in 1873, and entered the Prussian army as a medical officer. In 1880 he was attached to the Imperial Health Office, of which he became a member in 1885. He accompanied Robert Koch on his expeditions to Egypt and India for the investigation of cholera in 1883–4, and he was head of the commission sent by the German Government to India in 1897 to investigate plague. In 1888 Gaffky was appointed professor of hygiene in the University of Giessen, of which he was rector in 1894–5. Besides a number of reports and monographs on cholera he published researches on the etiology of typhoid fever, enteritis following the use of uncooked milk, and many other subjects.

Universities and Colleges.

UNIVERSITY OF OXFORD.

AT a congregation held on January 23rd the degree of Bachelor of Medicine was conferred on R. W. Lush and J. F. West.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

FIRST EXAMINATION FOR THE FELLOWSHIP.

SURGEONS, who hold or have held Commissions in His Majesty's Forces during the war, and who have done commendable surgical work during such service, may be admitted to the First Examination for the Diploma of Fellow on special conditions, as follows:

1. The subjects of the examination will be anatomy and physiology. The examination will be partly written and partly *viva voce;* the questions asked will have a direct bearing on practical surgery, and will not include morphology, embryology, histological or chemical methods, or practical examination in the use of the apparatus of the physiological laboratory.

2. A candidate must be a Member of the College, or a graduate of medicine of a university recognized by the College.

3. He must fill up a form of application provided for the purpose, to be obtained from Mr. F. G. Hallett, O.B.E., Examination Hall, Queen Square, Bloomsbury, W.C.1.

4. To this application should be attached evidence regarding his work from those under whom he has served.

5. The application, when submitted, will be considered by a committee of the Council of the Royal College of Surgeons, which will decide whether it be granted or not.

6. In the event of the application being granted, the candidate will be admitted on one occasion only to the special examination.

The first of these special examinations will be held in May, and the second in November of the current year. A third special examination will be held some time in the year 1920.

Candidates who wish to be admitted to the special examination in May, 1919, should submit their applications for admission at an early date if possible, and in any case not later than April 9th.

Medical News.

THE *Gazette des Hôpitaux*, which ceased to appear at the beginning of the war, has now resumed publication.

HIS Majesty the King of the Belgians has conferred the distinction of Chevalier de l'Ordre de Léopold upon Dr. A. George Bateman, of London, for services rendered to Belgium during the war.

SIR SAMUEL SCOTT, Bt., M.P. for St. Marylebone, has consented to introduce the Nurses' Registration Bill, drafted by the Central Committee for the State Registration of Nurses.

DR. CARREL, who has been in charge of the special French military hospital at Compiègne for four years, is returning to America to resume his post in the Rockefeller Institute.

THE annual dinner of the Hunterian Society will be held at Cannon Street Hotel, on Wednesday, February 5th, at 7 p.m., the President, Dr. Langdon Brown, in the chair. The annual oration will be delivered by Mr. Hugh Lett on Wednesday, February 12th, at 9 p.m., at the Rooms of the Royal Society of Medicine. The subject is "John Hunter and his influence on urinary surgery." All members of the profession are invited to be present.

THREE Hunterian lectures will be delivered before the Royal College of Surgeons of England next week: on Monday by Mr. A. J. Walton, assistant surgeon to the London Hospital, on the surgery of the spinal cord in peace and war; on Wednesday by Mr. David Ligat, acting assistant surgeon to the Middlesex Hospital, on the significance and surgical value of certain abdominal reflexes; and on Friday by Mr. Gordon Taylor, assistant surgeon to the Middlesex Hospital, on abdominal injuries of warfare. The lectures will be given at 5 p.m. each day.

A COURSE of Imperial Studies Lectures on physiology and national needs will be given at King's College, London, on Wednesdays. The first lecture, on physiology and the food problem, will be given by Professor Halliburton on February 5th; the second, on physical training of the open-air life, by Dr. M. S. Pembrey on February 12th; the third, on vitamines, by Professor Hopkins on February 19th; the fourth, on scurvy, by Professor Harden on February 26th; and the fifth, on physiology and the study of diseases, by Professor Noël Paton on March 5th. The lectures will be given at 5.30 p.m. on each day.

AN account was given last week (p. 109) of the general terms of the bill for compulsory notification of pulmonary tuberculosis in France. The text, which is now available, appears to imply that a special authority is to be set up to receive the notifications and to provide for the treatment of the patients and the disinfection of their houses. It is estimated that 50,000 beds will be required in 500 new institutions, and that the grant in aid to the patients' dependants will amount to nearly a million sterling a year.

AT a meeting of the executive subcommittee of the Medical Parliamentary Committee, held on January 24th, it was announced that Sir Henry Morris had resigned the chairmanship on private grounds, and that Sir W. Watson Cheyne had been unanimously elected to succeed him. Sir Watson Cheyne, on taking the chair, remarked on the necessity of defining the objects of the committee, and of making its constitution representative. After discussion a statement was adopted indicating the programme of the committee.

THE Royal Sanitary Institute will hold a conference on post-war developments relating to public health on March 13th, 14th, and 15th. The following subjects will be brought forward for discussion: City hygiene in relation to employment; housing for city clerks and similar workers; public health aspect of tuberculosis; public health work and propaganda; welfare work in factories; child welfare work.

CAPTAIN J. R. DE LAMAR, an American mine owner, has left £2,000,000 to be distributed among the Harvard and Johns Hopkins Medical Schools and the College of Physicians and Surgeons of Columbia University, New York. The bequest is to be applied for purposes of medical research into the causes of disease and the principles of correct living.

SIR LAZARUS FLETCHER, F.R.S., who has held the office of Director of the Natural History Museum since 1909, will retire on March 3rd under the age rule. The first occupant of the office was Sir Richard Owen, who was appointed in 1856, after having worked for thirty years in the museum of the Royal College of Surgeons. In 1884 he was succeeded as director by Sir William Flower, who had previously been for twenty-three years curator of the museum of the Royal College of Surgeons. When, owing to failing health, Flower retired from the directorship of the Natural History Museum in 1898, he was succeeded by Sir Ray Lankester, who held the appointment until 1909, when Sir Lazarus Fletcher was appointed.

THE Conjoint Board of Scientific Societies has published at the house of the Royal Society, London, W.1, a diary of forthcoming meetings, and also a broadsheet of meetings from January 27th to February 8th. The constituent societies, which number fifty-four, include the Royal College of Physicians of London, the Royal College of Surgeons of England, the Physiological Society, the Pharmaceutical Society, the Royal Society of Medicine, the Biochemical Society, and the Society of Public Analysts. The list of these societies gives the name of the president and the address. Announcements of meetings should be sent to Professor R. A. Gregory, *Nature* Office, St. Martin's Street, London, W.C. 2.

THE annual meeting of the American Medical Association will be held at Atlantic City in June this year. It is to be a "victory meeting," and delegates from all the allied countries are invited to attend. It has the approval of the Secretary of War and will have a semi-governmental character. There will be conferences between representatives of the medical departments of the United States Government and the foreign delegates as to the good results derived from the experience of the various countries in medicine and surgery, especially in their military aspects. The establishment and maintenance of co-operative inter-allied graduate study and research will be discussed.

AN Army Council Instruction has been issued drawing the attention of all concerned to that portion of Paragraph 26 of the Regulations for the Army Medical Service dealing with the custody and safe keeping, under lock and key, of drugs of a poisonous character. These should not be stocked in excess of actual requirements. Careful supervision to prevent improper expenditure should be observed in regard to the usage, issue, and dispensing of all hypnotic and poisonous drugs, especially cocaine, cocaine hydrochloride, heroin (diamorphine hydrochloride), morphine and its salts, opium and its preparations, veronal (barbitone). This instruction applies also to the medical branch of the Royal Air Force.

IN the JOURNAL of November 9th, 1918, p. 517, we published the findings of the Departmental Committee on Anthrax, appointed by the Home Secretary in 1913 to inquire into the danger of infection from anthrax in the manipulation of wool, goat hair, and camel hair. The Committee's report insisted that the prevention of anthrax must be treated as a world-problem if finality was to be reached. Owing to the impracticability of providing by regulations for disinfection in factories, the Committee recommended that it should be permitted only at central disinfecting stations set up for this sole purpose. The Home Secretary has now appointed a committee to establish a trial disinfecting station as recommended by the Departmental Committee, to carry out disinfection in it, and to make recommendations as to the construction, equipment, and working of other disinfecting stations to be erected. The chairman of the committee is Sir William Middlebrook, who succeeded Sir Thomas Whittaker as chairman of the Departmental Committee on Anthrax. The secretary is Mr. G. E. Duckering, to whom communications on the subject should be addressed at 72, Bridge Street, Manchester.

Letters, Notes, and Answers.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

The postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology, Westrand, London*; telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand, London*; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Medisecra, Westrand, London*; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

The address of the Central Medical War Committee for England and Wales is 429, Strand, London, W.C.2; that of the Reference Committee of the Royal Colleges in London is the Examination Hall, 8, Queen Square, Bloomsbury, W.C.1; and that of the Scottish Medical Service Emergency Committee is Royal College of Physicians, Edinburgh.

QUERIES AND ANSWERS.

L.R.C.P.S. asks to be referred to information and statistics as to the after-results of trephining in epilepsy.

M.O.H., who has never driven a car, asks for advice in the choice of a type for country use; it must afford good protection from the weather.

"ENQUIRER" would be glad to know the address, and if possible any further particulars, of a good class sanatorium situated in a warm dry climate, suitable for a phthisical patient who also suffers from extensive bronchitis during the winter months.

LETTERS, NOTES, ETC.

DR. H. CARRE-SMITH (London, W.) thinks that some readers will be glad to know that Messrs. Suttley and Silverlock of 92, Blackfriars Road, S.E.1, have brought out at his suggestion a form for ordering stimulants in cases of illness.

HISTORICAL ACCOUNT OF TONSILLECTOMY.

OUR attention has been called by a correspondent to the fact that a communication with the above title, by Dr. E. E. Violet Glover, which was submitted to us as an original article and published in the JOURNAL of December 21st, 1918, is taken almost word for word from Morell Mackenzie's *Diseases of the Throat and Nose*, vol. i, published in 1880. We have investigated the matter, and have given Dr. Glover an opportunity of furnishing an explanation. In the course of a letter, dated January 22nd, she makes the following statement:

"I *intended* to send you one of my original articles, of which I have a number, as well as several epitomes of famous books, and I enclosed one with a covering letter. One of my friends, however, suggested I should insert *a series* of articles—starting with some sort of historical account, and as I had a short précis (one of several) by me, on his advice I forwarded the 'Historical' Account. This was got out a long time ago, and I had no idea from where I had got it as I am a member of several libraries, Mackenzie's name not being among a few references on the back of the script. I therefore substituted this account in the envelope, but I left the letter I had written, as I was pressed for time, and had forgotten I mentioned an original article."

In all medical writings a certain amount of reproduction from previous authors is allowable, provided due acknowledgement is made. We are glad to have Dr. Glover's assurance that in this instance the bodily lifting of material without indication of the source was due to inadvertence; but we greatly regret our unwitting share in the incident.

THE appointment of certifying factory surgeon at Hitchin (Hertford) is vacant.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Seven lines and under	0	6	0
Each additional line	0	0	9
Whole single column	4	0	0
Whole page	12	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.